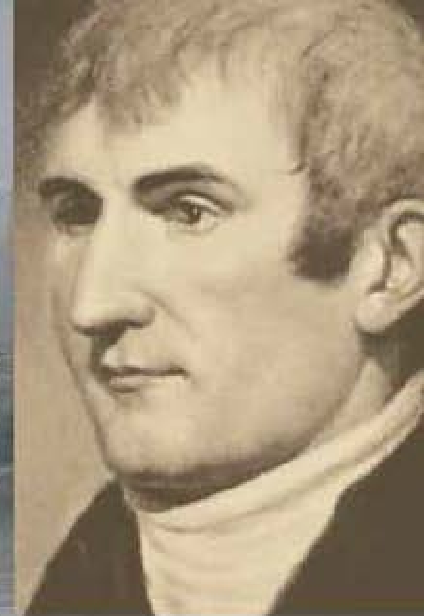

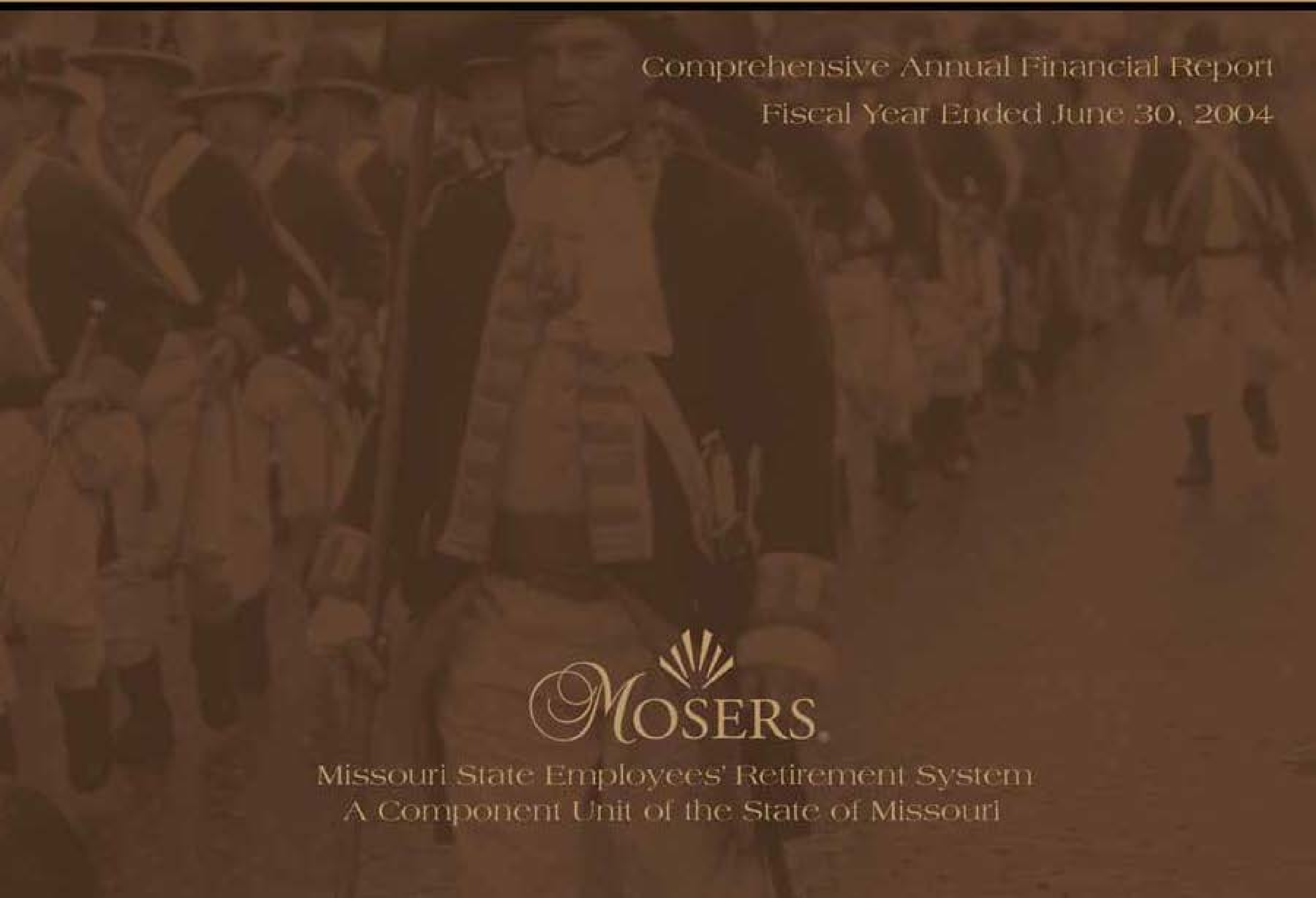

# Comprehensive Annual Financial Report

Fiscal Year Ended June 30, 2004

MOSERS

Missouri State Employees' Retirement System

A Component Unit of the State of Missouri

# Lewis and Clark
## Looking to Our Future . . .Paying Tribute to Our Past

This year, we commemorate the 200th anniversary of the epic voyage of Meriwether Lewis and William Clark – a journey that changed America. These two adventurers along with President Thomas Jefferson's appointed crew, the Corps of Discovery, traveled thousands of miles into the wilderness searching for the existence of a northwest passage that could serve as a waterway for American westward expansion.

The Corps of Discovery's route across the continent was chosen on the belief that the most practical passage across the continent followed the Missouri River to its headwaters in the Rocky Mountains. Once over the mountains, the expedition was hoping to find another river leading directly to the ocean. Although their expectations did not match the realities of the western land, the Lewis and Clark expedition returned triumphant to Missouri having uncovered a wealth of knowledge about Native Americans, geography, animals, and plants of the western United States.

As we pay tribute to our past, we also look to our future recognizing that the world continues to face great unknowns. We will continue on this daring journey with the same courage and perseverance of Lewis and Clark, confident and optimistic in our ability to master the new challenges and discoveries of the 21st century.

Gary Findlay
Executive Director

Missouri State Employees' Retirement System

A Component Unit of the State of Missouri

# *Looking to Our Future . . . Paying Tribute to Our Past*

Comprehensive Annual Financial Report

Fiscal Year Ended June 30, 2004

Gary Findlay
Executive Director

Gary Irwin
Chief Finance Officer

MOSERS®

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* Missouri State Employees' Plan
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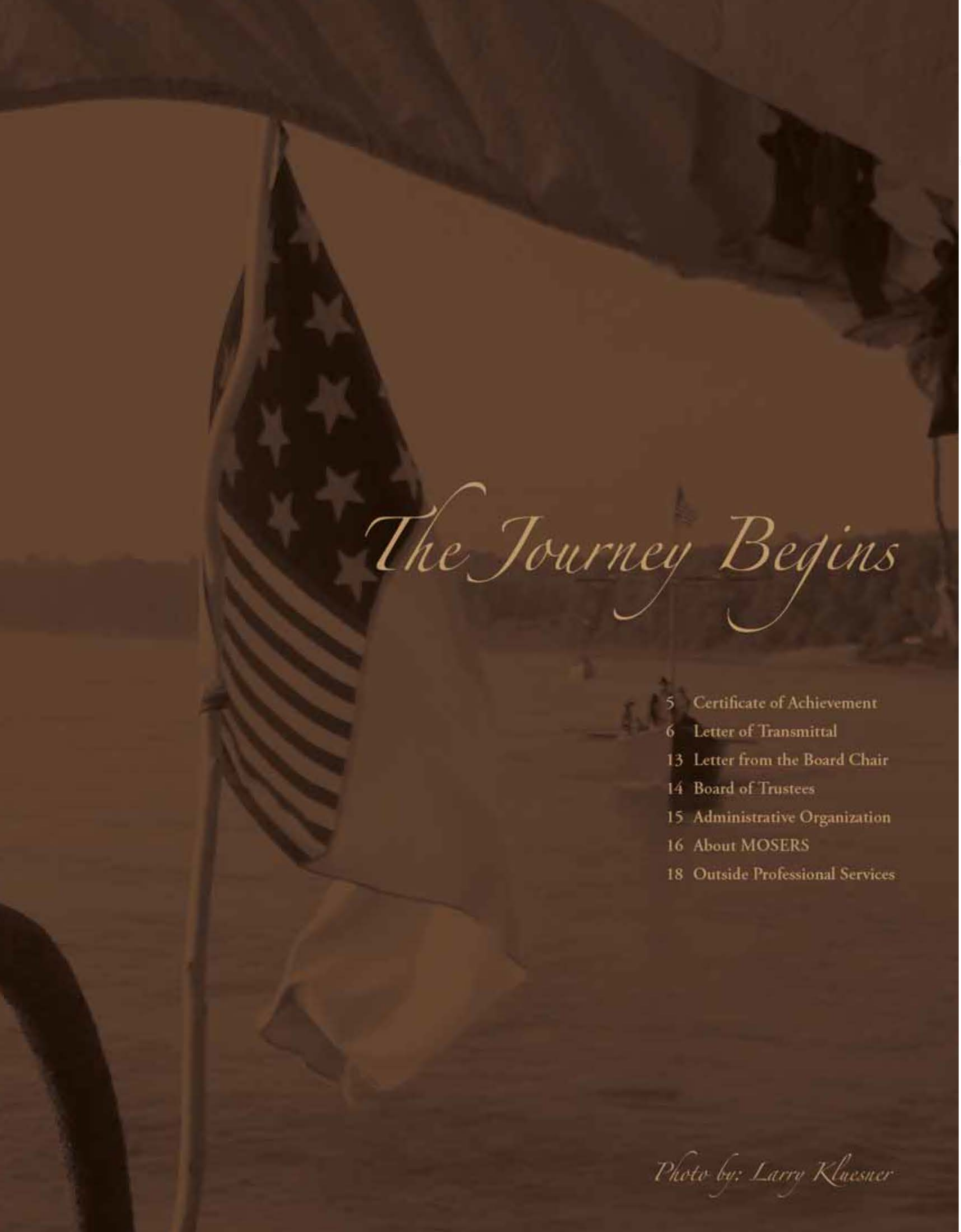
# The Journey Begins

President Thomas Jefferson had long been interested in the American West and envisioned an official expedition that would combine diplomatic, scientific, and commercial goals. In 1804, when the momentous transfer of lands, known as the Louisiana Purchase, passed from Spanish and French hands to the United States, Lewis and Clark were given an extraordinary charge to explore this newly acquired territory by following the Missouri River to its source and proceeding on to the Pacific Ocean.



# The Journey Begins


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Photo by: Larry Kluesner

# *Certificate of Achievement*

# Letter of Transmittal

October 1, 2004

The Board of Trustees
Missouri State Employees' Retirement System
907 Wildwood Drive
Jefferson City, MO  65109

Dear Board Members:

It is again with great pleasure that I submit the annual report of the Missouri State Employees' Retirement System (MOSERS). In this year's report, we pay tribute to the Corps of Discovery's epic journey led by Meriwether Lewis and William Clark 200 years ago. It was primarily due to their journey into the then newly acquired lands of the Louisiana Purchase that St. Louis, Missouri became known as the "Gateway to the West." We honor their courage and tenacity in venturing into unchartered territory, led by the spirit of adventure, blazing trails for others to follow. Pursuit of excellence in any endeavor involves long-range planning, dealing with the unknowable, and the acceptance of certain elements of risk – Lewis and Clark were certainly role models for all of us in those respects.

**Report Contents and Structure**

MOSERS is considered a component unit of the state of Missouri for financial reporting purposes and as such, the financial statements contained in this report are also included in the *State of Missouri's Comprehensive Annual Financial Report*. The financial information presented in this report is the responsibility of the management of MOSERS, and sufficient internal accounting controls exist to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements, supporting schedules, and statistical tables. The report is also designed to comply with the reporting requirements of Sections 104.480, 104.1006, and 105.661 of the Revised Statutes of Missouri (RSMo) as amended. The report is divided into the following five sections:

- The Introductory Section which contains general information regarding the operations of MOSERS;
- The Financial Section which contains a management discussion and analysis report, the independent auditors' opinion, the financial statements and notes thereto, and required supplementary information regarding the funds administered by MOSERS;
- The Investment Section which contains information pertaining to the management of the investments of the pension trust funds, including reports from the system's chief investment officer and investment consultant;
- The Actuarial Section which contains information regarding the financial condition and financial position of the retirement plans administered by the system, including the retained actuary's opinion; and,
- The Statistical Section, which contains general statistical information regarding system participants and finances.

**Fiscal Year 2004 Highlights**
***Communications & Member Contacts***
Our member communications focus this year has been a continuation of our efforts to improve our members' awareness of the benefits we administer and the value of those benefits. The most significant challenge this fiscal year was the implementation of Senate Bill 248 that contained the health care retirement incentive. As the bill progressed through the legislative process, we made multiple updates to the web site in order to keep members informed. Individualized notification letters were sent to eligible members, and four additional pre-retirement planning seminars were added to the schedule to accommodate increased interest. We had a total of 1,753 participants in the pre-retirement planning seminars last year, a 45% increase over 2003, and their satisfaction rate (as judged from completed evaluations) was 4.9 out of a possible 5.0.

Between July 1 and September 30, 2003, MOSERS experienced over two-times the number of new retirements compared to the same period in 2002. According to the final report to the Governor, 1,595 employees retired as a result of the retirement incentive during the window period. MOSERS' staff also processed 101 applications for members who ultimately rescinded their retirements during this period, as well as regular retirements not related to the incentive. In addition to the increase in new retirees, we experienced a 21% increase in phone calls compared with the same period last year. The month of July was particularly busy with a 154% increase in walk-ins and a 70% increase in service purchase calculations relative to July of 2002. While the extremely high volume affected service levels somewhat, we still maintained minimal waiting time for calls and walk-ins and also completed implementation of the legislation by the deadline with minimal overtime.

In October 2003, MOSERS offered an optional life insurance open enrollment for active employees that allowed eligible members to:

- Increase their coverage amount without proving insurability; and/or
- Modify the increments of their coverage to multiples of $10,000.

In addition, a provision allowing members to elect optional life insurance as a result of a family status change was also added.

Special individualized enrollment brochures were produced for the open enrollment. Phone and web enrollments were accepted in addition to the mail-in enrollment process. Informational articles were drafted and posted to our member web site and included in the *PensionsPlus* newsletter. The life insurance handbook was revised, printed, and delivered to agency human resources (HR) staff with instructions to provide each eligible employee with an updated handbook, and the optional life enrollment/change form was revised to reflect the new provisions.

On January 1, 2004, Lincoln University elected to participate in MOSERS' life insurance and long-term disability programs. A special enrollment was held to allow Lincoln University employees to make their coverage elections. A special enrollment packet was developed, and the enrollment was coordinated with The Standard Insurance Company.

While we continue to use our newsletters, brochures, phone counseling, and group meetings to ensure that all prospective retirees have sufficient information to make informed decisions, we also focus on improving member access to information via the system's web site. Members are able to view their personal information in our database and produce their own benefit estimates without the intervention of a benefits counselor. The volume of estimates being produced in this manner suggests that this is an increasingly popular feature. We have had 13,928 members who requested passwords in order to access

their personal information online. That represents a 64% increase over last year. To ease the frustration of not remembering a password, we instituted an e-mail reminder process where members who have forgotten their passwords are able to receive a copy of their password via the e-mail address they have established with us.

Another web site improvement includes allowing members to update certain items of their personal information online. The process was tested on a trial basis during the optional life open enrollment in October and worked so well that it was expanded and made a permanent feature of our system. As part of the security for these processes, we are now requiring additional personal information as part of the verification for member access.

During the fiscal year ended June 30, 2004, 2,417 individuals retired with 1,984 retiring directly from active service. In addition to the retirements, we have had over 41,900 contacts with members. These contacts included direct one-on-one counseling of members who visited our office (2,571 contacts), phone contacts with members (37,281 contacts), and training seminars for members (2,115 contacts). The average wait time for member phone calls was only 26 seconds. We revised and updated several of the seminars this year to better meet members' needs. The *Introduction to MOSERS Benefits* seminar was renamed *Benefit Basics*, which is easier for members to remember and also gives a clearer picture of the content. The *Comprehensive Financial Education Workshop* was revamped and has emerged as *Money Matters*, focusing on debt management, and budgeting and saving for retirement goals using basic concepts and easy-to-use tools. In the first three months of 2004, we received four special requests for this workshop.

Technological improvements allow MOSERS' staff to better achieve our mission which is, "To exceed customer expectations by providing outstanding benefit services through professional plan administration and sound investment practices." We have improved system backups by installing Microsoft servers for various functions. One of those included installation of a disk backup server that does not require tape drives which resulted in a savings of $2,800 per year in tape costs. We also replaced the water-based fire suppression system in our computer room with a fire suppression system that will not damage the computer hardware in the event of a fire.

Requests from HR staff of state agencies prompted an enhancement to the member service information to show the amount of service earned (years/months/days) for each period of service and the identity of the state department where each period of service was accrued.

An electronic mailing list was created for agency payroll/personnel staff that allows agency personnel to sign up and receive our new online newsletter, *HR Update*. This has improved our delivery of information to agencies. Since the *HR Update* is sent out "as needed" rather than on a set schedule, agency HR staff know the information is important and timely, and they have welcomed it as an important resource. An example of the way this is used to disseminate information involves my letter addressing various rumors running rampant through the state employee population. In addition to posting the letter on the web site, we made it the focus of an *HR Updat*e with the request that agencies forward the information through their electronic networks and post it on agency bulletin boards. By using the *HR Update* in this way, we reinforced the importance of the agency HR representatives to our delivery of benefit information, and we eliminated the need to do a special mailing to members (saving at least $15,000 in postage alone). As evidence of success, we received numerous comments from members who were very appreciative of our proactive stance on the rumors issue.

As a first step toward offering a similar subscription service for members, we are in the process of converting our newsletters to a web format. Members will be able to sign up to receive newsletters online, potentially saving printing and postage costs in the future. The web format will make viewing easier and faster than the current PDF process that requires the document to be viewed through Adobe Acrobat Reader.

The redesign of the board web site was completed and the new site was launched in September 2003. Board members were each given their own password, and the home page is customized with their name when they sign on. The trustee handbook and several other documents that had been in a PDF format were redone in a web format to speed access and make it easier to find information. The MOSERS expense report form and travel policy were added to the home page for easy reference.

***Customer Satisfaction Surveys***
The customer satisfaction survey was revised this year resulting in two separate surveys; one for those members who recently received counseling from a benefit counselor and one for those members who have called MOSERS for assistance. We are able to identify the reasons for the contacts using the new surveys, which will help us as we consider the areas we need to focus on in the future. This year we began publishing the results of the surveys, which appear on both the member web site and the trustee site and are updated automatically each time a new survey result is entered into the database.

***Customer Service Standards***
Member satisfaction is our top priority. We continue to seek ways to improve our delivery of customer service, both by our phone communications and in our written communications. Our phone technology has provided us with an efficient, yet customer friendly system allowing a member to reach a person with ease. Our phone system also provides us with the technology to compile statistical information regarding volume, timing, and duration of phone calls. This information is useful as it keeps us focused on how we can improve our customer service efforts.

We use the Cost Effectiveness Measurement (CEM) Benefit Administration Benchmarking Analysis to gauge our overall performance and cost-effectiveness each year. CEM evaluated 53 leading pension systems, including systems in the U.S., Canada, Australia, and the Netherlands. CEM has identified 14 other U.S. public pension plans as our most relevant peer group, based upon membership size and system assets. The CEM survey rated MOSERS' service as the second highest in our peer group with a total service score of 83. This is above the peer average of 74, and above the average score of 71 for all 53 systems participating in the CEM survey. While we desire to be first every year in this category, it is important to know that CEM defines service as "anything a member would like, before considering costs." Many of the recommendations for higher service would increase our cost. While we intend to incorporate most of the suggestions, we will not pursue some because they do not make sense on a cost/benefit basis. In addition, we continue to use focus groups to assist us in targeting areas where we can improve on our customer service. We are in the process of streamlining our forms, reports, and processes to simplify the paperwork process for new hires and transfers. We were able to condense three MOSERS' forms into one and developed a new member packet for the members to complete when they are hired or upon transferring to another department. This eliminates the duplicate entry of information and streamlines the process for employees.

***Administrative Costs***
While customer satisfaction has always been our top priority, it is important to ensure that we are delivering that service in a cost-effective manner. The CEM benchmarking survey provides useful comparative information regarding our administrative costs.

Despite being the third smallest system in our peer group, which typically would place us in a cost disadvantaged position relative to the systems with the most members, our total adjusted administration cost is $66 per member and annuitant, which is significantly below the peer average of $87. In the executive summary of their report, CEM states that "Your costs appear to be impressively low given your above average service and below average total volume (i.e. economy of scale disadvantage)." This is just where we want to be.

***Investments***
It's been two years since we made a monumental shift away from the traditional approach to portfolio management toward a more dynamic process. The primary drivers behind this movement were the beliefs that (i) returns from the market would be considerably lower in the future than they had been in the past, thus suggesting that more active management should be emphasized in the portfolio; (ii) staff should be given some flexibility to alter the policy allocation where valuations had become extreme; and (iii) there was a way to build a more economically diversified portfolio, which should lead to lower overall volatility and thus more stability in the contribution rates.

The following table compares several relevant statistics for the old policy benchmark, the new policy benchmark, and our actual results.

**Two-Year Results Ended June 30, 2004**

| Statistics | Old Policy Benchmark | New Policy Benchmark | MOSERS Actual Results |
|---|---|---|---|
| Annualized return | 10.8% | 11.1% | 12.0% |
| Annualized standard deviation | 11.9 | 9.6 | 10.0 |
| Percentage of positive months | 66.7 | 70.8 | 75.0 |
| Percentage of negative months | 33.3 | 29.2 | 25.0 |

While all of this information provides insights into how each has performed, there are two things that are particularly striking to me. The first is that through a combination of staff initiated shifts in the sub-asset class allocation model and the overall performance of the active managers, our performance has produced an additional 0.9% of annualized return over the new policy benchmark (which is roughly $91 million over the 24 month period). The second is that the new policy benchmark has generated about 20% lower volatility than the old policy benchmark, while the returns have been slightly better. Higher returns and lower risk can only be achieved through improved diversification or a better mix of assets.

In my view, a significant portion of our success can be attributed to an excellent investment staff operating under governance policies that allow and encourage them to pursue excellence in investment policy implementation. I firmly believe this is further confirmation of the notion that good governance policies produce good results. Additional detailed information regarding MOSERS' investments can be found in the investment section of this report.

***Legislation***
Senate Committee Substitute for Senate Bill 1195 was signed by the Governor on July 2, 2004, and became effective August 28, 2004. This legislation allows certain juvenile court personnel whose positions are financed in whole or in part by a public or private grant to receive prior service credit for grant paid service rendered prior to July 1, 1999.

The Office of the State Courts Administrator (OSCA) had estimated that there are approximately 40-100 employees who could be affected by this legislation. Assuming there would be approximately 100 employees eligible, it is doubtful that the inclusion of prior service credit for grant-paid personnel would cause a material increase in the contribution rate, although the unfunded liability would be affected. We were unable to assess this impact through the actuarial process (valuation) since we did not have data in our system on the juvenile court personnel that could be affected by the proposal.

**Summary of Financial Information**

The following schedule is a comparative summary of the pension trust funds' additions and deductions for the years ended June 30, 2004, and June 30, 2003.

**Pension Trust Funds**

| | Year Ended June 30, 2004 | Year Ended June 30, 2003 |
|---|---|---|
| Additions | $1,072,279,299 | $518,210,724 |
| Deductions | (392,194,639) | (345,647,243) |
| Net change | $ 680,084,660 | $172,563,481 |

The following schedule is a comparative summary of the revenues and expenses of the Internal Service Fund (insurance activity) for the years ended June 30, 2004, and June 30, 2003.

**Internal Service Fund**

| | Year Ended June 30, 2004 | Year Ended June 30, 2003 |
|---|---|---|
| Operating revenues | $ 26,152,466 | $ 25,659,537 |
| Operating expenses | (26,245,743) | (25,644,550) |
| Nonoperating revenues | 24,353 | 31,179 |
| Net change | $ (68,924) | $ 46,166 |

Additional financial information can be found in the management discussion and analysis report, financial statements, and schedules included in the financial section of this report.

**Plan Financial Condition**

The funding objective of MOSERS' pension trust funds is to meet long-term benefit promises through contributions that remain approximately level as a percent of member payroll over decades of time. Historical information relating to progress in meeting this objective is presented on pages 45-46. During the year ended June 30, 2004, the funded ratio of the Missouri State Employees' Plan, which covers 94,467 participants, decreased from 90.9% to 84.6%, primarily as the result of plan investment experience from previous years. The funded ratio of the Administrative Law Judges and Legal Advisors' Plan, which covers 111 participants, increased from 78.3% to 79.7%, primarily as the result of favorable plan experience during the year. Funding of the Judicial Plan, which covers 861 participants, began on July 1, 1998. During the year ended June 30, 2004, the funded ratio of the Judicial Plan increased from 12.9% to 14%, primarily as the result of favorable plan experience during the year. Additional information regarding the financial condition of the pension trust funds can be found in the actuarial section of this report.

**Certificate of Achievement for Excellence in Financial Reporting**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to MOSERS for its comprehensive annual financial report (CAFR) for the fiscal year ended June 30, 2003. The Certificate of Achievement is a prestigious national award, recognizing conformance with the highest standards for preparation of state and local government financial reports. In order to be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized CAFR conforming to program standards. The CAFR must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. MOSERS has received a Certificate

of Achievement for the last fifteen consecutive years (fiscal years ended 1989-2003). We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to GFOA for evaluation.

**Conclusion**
This report is a product of the combined efforts of MOSERS' staff and advisors functioning under your leadership. It is intended to provide complete and reliable information that will facilitate the management decision process; serve as a means for determining compliance with legal requirements; and allow for the evaluation of responsible stewardship of the funds of the system. As in the past, MOSERS received an unqualified opinion from our independent auditors on the financial statements included in this report. The opinion of the independent auditor can be found on pages 22-23.

Copies of this report are provided to the Governor, State Auditor, Joint Committee on Public Employee Retirement of the General Assembly, and all state agencies. These agencies form the link between MOSERS and its members, and their cooperation contributes significantly to the success of MOSERS. We hope all recipients of this report find it informative and useful.

I would like to take this opportunity to express my gratitude to you, the staff, the advisors, and other people who have worked so diligently to assure the continued successful operation of the system.

Respectfully submitted,

Gary Findlay

Gary Findlay
Executive Director

# Letter from the Board Chair

MOSERS®

October 1, 2004

Dear Members:

On behalf of the board of trustees, I am pleased to present the *MOSERS' Comprehensive Annual Financial Report* for the fiscal year ended June 30, 2004. As we pay tribute to our past by commemorating the 200th anniversary of the Lewis and Clark expedition, we also take a moment to reflect on the direction we have charted for MOSERS, and are pleased to report several "journal entries" from the past year that highlight the financial status of your retirement system.

First and foremost, your retirement system remains well funded and your promised benefits are secure. The MOSERS fund generated a return of 17.1% (net of expenses) for the year, placing MOSERS' investment return in the top 20% of all public pension funds with assets in excess of $1 billion as reported by the Independent Consultant Cooperative.

Much of the year has been spent implementing the new asset allocation model that was adopted in June 2002. Since its inception, the new asset allocation mix has outperformed the previous allocation, producing an additional $91 million in higher returns while reducing asset risk. This model is consistent with MOSERS' fundamental investment principles that focus on preserving the long-term value of the fund while at the same time producing the resources needed to meet the system's future benefit obligations.

It was a quiet year on the legislative front as there was no significant retirement legislation enacted. However, fiscal year 2004 began with a flurry of activity relating to the implementation of Senate Bill 248 – legislation that was passed in June 2003 that created a health care retirement incentive plan for eligible general state employees who retired during a specific timeframe. During the peak of the incentive period, calls to MOSERS' benefits staff were up over 20%, and personal consultations increased 154%. Retirement applications for 2,223 members were processed during this relatively short incentive window (1,595 of which were attributable to the incentive). I am pleased to report that MOSERS' staff processed all retirements on time while maintaining our excellent service level.

Although we experienced no board turnover this past fiscal year, we anticipate this will not be the case in fiscal year 2005. While the contributions of those trustees exiting the board will be missed, we remain confident that the MOSERS' governance policy will ensure a smooth transition and serve as a strong foundation for new trustees to build upon.

In keeping with this year's theme, "Looking to Our Future – Paying Tribute to Our Past," it is our hope that this letter provides you with a brief perspective on MOSERS' accomplishments. We look forward to meeting your future needs. If you have any questions regarding this report, please contact us at MOSERS, PO Box 209, Jefferson City, MO 65102, or by calling 1-800-827-1063.

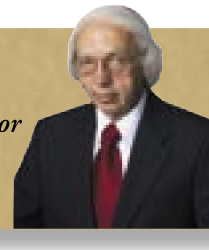
Sincerely,

Lori Strong-Goeke

Lori Strong-Goeke, Chair
Board of Trustees

# Board of Trustees

# Administrative Organization



Gary Findlay
*Executive Director*

Karen Stohlgren
*Deputy Exec. Director*
*Chief Operations Officer*

Jake McMahon
*Chief Counsel*

Rick Dahl
*Deputy Exec. Director*
*Chief Inv. Officer*

Gary Irwin
*Chief Finance Officer*

Scott Simon
*Manager of Benefit Services*

Sandra Lynn
*Manager of Communications*

Randy Rippee
*Manager of Information Technology*

JoAnn Looten
*Manager of Records*

Diana Mosier
*Manager of Admin. Services*

Greg Beck
*Internal Auditor*

Judy Delaney
*Executive Assistant*

Pat Neylon
*Manager of Public Equity*

Jim Mullen
*Manager of Public Debt*

Tricia Scrivner
*Manager of Alternatives*

Shannon Davidson
*Manager of Inv. Operations*

Meg Cline
*Mgr. of Inv. Policy & Comm.*

# About MOSERS

**MOSERS' MISSION**

*To exceed customer expectations by providing outstanding benefit services through professional plan administration and sound investment practices.*

MOSERS was established September 1, 1957, and is governed by laws of the state of Missouri.

**Purpose**
MOSERS provides retirement, survivor, and disability benefits, as well as life insurance to its members.

MOSERS administers retirement benefits for most state employees, including members of the Missouri General Assembly, elected state officials, administrative law judges and legal advisors, and judges. MOSERS is responsible for administering the law in accordance with the expressed intent of the Missouri General Assembly and bears a fiduciary obligation to the state employees who are its members and beneficiaries.

**Administration**
State law provides that responsibility for the administration of MOSERS is vested in an eleven member board of trustees. The board is comprised of:

- Two members of the Senate appointed by the President Pro Tem of the Senate.
- Two members of the House of Representatives appointed by the Speaker of the House.
- Two members appointed by the Governor.
- The State Treasurer.
- The Commissioner of Administration.
- Three other members of the system: two active members elected by the active and terminated-vested members, and one retiree elected by the retired members.

The day-to-day management of MOSERS is delegated to the executive director who is appointed by the board and serves at its pleasure. The executive director acts as advisor to the board on all matters pertaining to the system, contracts for professional services, and employs the remaining staff needed to operate the system.

**Organization**
The executive director, deputy executive director - chief operations officer, and the deputy executive director - chief investment officer are responsible for planning, organizing, and administering the operations of the system under the broad policy guidance and direction of the board.

MOSERS' office is divided into eight administrative sections that perform specific functions for the system.

**Executive Services**
The executive services team provides administrative support by assisting the executive director and chief operations officer, and chief investment officer in the major legal, operational, and oversight functions of the retirement, benefit, and communication programs.

**Accounting**
This section is responsible for all financial records of the programs administered by MOSERS, including the preparation of financial and statistical reports. Accounting performs the purchasing functions for MOSERS and interfaces with the investment custodian, Office of Administration accounting, various payroll/personnel departments, life insurance companies, actuaries, banks, and the IRS on all accounting related issues.

**Benefit Services**
Benefit services is responsible for all contact with the membership regarding the benefit programs administered by MOSERS, which include retirement, life insurance, and long-term disability.

**Communications**
Communications is responsible for providing clearly written and attractively designed publications and educational seminars needed to inform all members about benefit programs administered by MOSERS. Communications and the information technology section are jointly responsible for MOSERS' web site.

**Information Technology**
Utilizing an IBM AS400 minicomputer and high-end work stations, information technology provides all computer and technical design support for MOSERS' data processing activities. This group is responsible for establishing and updating computer programs to implement plan changes and also maintains members' folder information on FileNet - an optical disk image system that allows information to be stored and processed using computer displayed images of original documents. Information technology is also responsible for administration of the personal computer network and the telephone system. Information technology and the communications section are jointly responsible for MOSERS' web site.

**Investments**
The primary function of the investment department is to provide internal investment management and consulting services to the board and the executive director. Other functions include hiring and terminating external investment managers, making strategic allocation decisions, analyzing and rebalancing the overall asset allocation and portfolio, serving as a liaison to the investment community, and informing and advising the board and executive director on financial, economic, and political developments which may affect the system. The investment staff also works with the asset consultant and the executive director in selecting and monitoring external money managers. Information regarding the investment professionals who provide services to MOSERS can be found in the Investment Section.

**Records Management**
Records management is responsible for establishing and maintaining all membership records - including maintenance of the data on the electronic imaging system, balancing payroll deductions for insurance, and entering the payroll, service, and leave data into the system's computerized database.

**Administrative Services**
Administrative services provides clerical support, mail services, and general building maintenance for MOSERS' personnel. Human resources is also represented in this section.

**CORE VALUES**

*Quality - Strive to exceed the expectations of internal and external customers through innovation, competance, and teamwork. Seek to "do it right" the first time.*

*Respect - Be sensitive to the needs of others, both within and outside the organization. Be courteous, considerate, responsive, and professional.*

*Integrity - In all endeavors, act in an ethical, honest, and professional manner.*

*Openness - Be willing to listen to, and share information with others. Be receptive to new ideas. Be trusting of others.*

*Accountability - Take ownership of and responsibility for actions and their results. Learn from mistakes. Control system risks and act to protect the security of member information and system assets.*

# Outside Professional Services

## ACTUARY

***Gabriel, Roeder, Smith & Co.***
Actuaries and Consultants
Norman L. Jones, Brad Armstrong
Southfield, Michigan

## AUDITORS

***KPMG LLP***
Certified Public Accountants
Andrew J. Blossom, Jaime L. Hamm
Kansas City, Missouri

## LEGAL COUNSEL

***Thompson Coburn***
Attorneys at Law
General Counsel
Allen Allred, Tom Litz
St. Louis, Missouri

***Perkins Coie***
Attorneys at Law
Timberland Counsel
Jim Johnston
Seattle, Washington

## MASTER CUSTODIAN

***Mellon Trust***
Primary Custodian
Irene Speridakos, Doug Cook
Boston, Massachusetts

## INVESTMENT MANAGEMENT CONSULTANTS

***Summit Strategies, Inc.***
General Asset Consultant
Steve Holmes, Tom Pollihan
St. Louis, Missouri

***TimberLink, LLC***
Timberland Consultant
Kate Robie
Atlanta, Georgia

## RISK MANAGEMENT CONSULTANTS

***Charlesworth & Associates, LLC***
Art Charlesworth, Bob Charlesworth
Overland Park, Kansas

## THIRD-PARTY ADMINISTRATORS

***The Standard Insurance Company***
Disability and Life Insurance
Tom Trussell
Overland Park, Kansas

***TIAA-CREF***
College & University Retirement Plan
Robert Kissel, Mike Mitchell
Chicago, Illinois

## SECURITIES LENDING ADVISORS

***Credit Suisse First Boston Corporation***
Dwight Skerritt
New York, New York

***Lehman Brothers***
Matt Baldassano, Johnine Kilgallon
New York, New York

## INVESTMENT ADVISORS

***AmeriCap Advisers, LLC***
Michael Gayed, Nadia Albert,
Steve Shobin
New York, New York

***BlackRock Financial Management***
Rob Capaldi, Andy Phillips, Jeff Gary
New York, New York

***Blackstone Alternative Asset Management, LP***
Tom Hill, Hal Lindquist, Rupal Doshi
New York, New York

***Blackstone Real Estate Advisors, LP***
Gary Sumers, Ken Whitney
New York, New York

***Blackstone Bridge Advisors, LP***
Steven Saslow, Steve Morton
New York, New York

***Blakeney Management***
James Graham-Maw, Miles Morland
London, England

***Blum Capital Partners, LP***
N. Colin Lind, Jeff Cozad
San Francisco, California

***The Campbell Group***
John Gilleland, Julie Lawrence
Portland, Oregon

***Capital Guardian Trust Company***
Andy Barth, Mike Nyeholt
Los Angeles, California

***Catterton Partners***
J. Michael Chu, Mark Sirinyan,
John Scerbo
Greenwich, Connecticut

***DDJ Capital Management, LLC***
Mike Forrester, David Breazzano
Wellesley, Massachusetts

***Dimensional Fund Advisors, Inc.***
Rex Sinquefield, Carol Wardlaw
Santa Monica, California

***Grantham, Mayo, Van Otterloo & Co, LLC***
Carolyn Nelson, Arjun Divecha
Boston, Massachusetts
Berkeley, California

***Hoisington Investment Management Co.***
Van Hoisington, Lacy Hunt
Austin, Texas

***Legg Mason Capital Management, Inc.***
Kyle Prechtl Legg, Chuck Knudsen
Baltimore, Maryland

***Mastholm Asset Management, LLC***
Thomas Garr, Theodore Tyson
Bellevue, Washington

***Merrill Lynch Asset Management Group***
Rick Vella, Lisa Torrington
New York, New York

***MHR Fund Management, LLC***
Hal Goldstein, Mark Rachesky
New York, New York

***NISA Investment Advisors, LLC***
Robert Krebs, Bill Marshall
St. Louis, Missouri

***Oak Associates, Ltd.***
Sandra Noll, Jim Oelschlager
Akron, Ohio

***OakBrook Investments***
Michael Lorenzen, Janna Sampson
Lisle, Illinois

***Oaktree Capital Management, LLC***
Howard Marks, Bruce Karsh, Russel Bernard, John Moon, Greg Brandner
Los Angeles, California

***Relational Investors, LLC***
Sandi Christian, Ralph Whitworth
San Diego, California

***Resource Management Services, LLC***
Phillip Woods, Craig Blair, Tim Moothart
Birmingham, Alabama

***Silchester International Investors***
Christopher Cowie, Stephen Butt
London, England
New York, New York

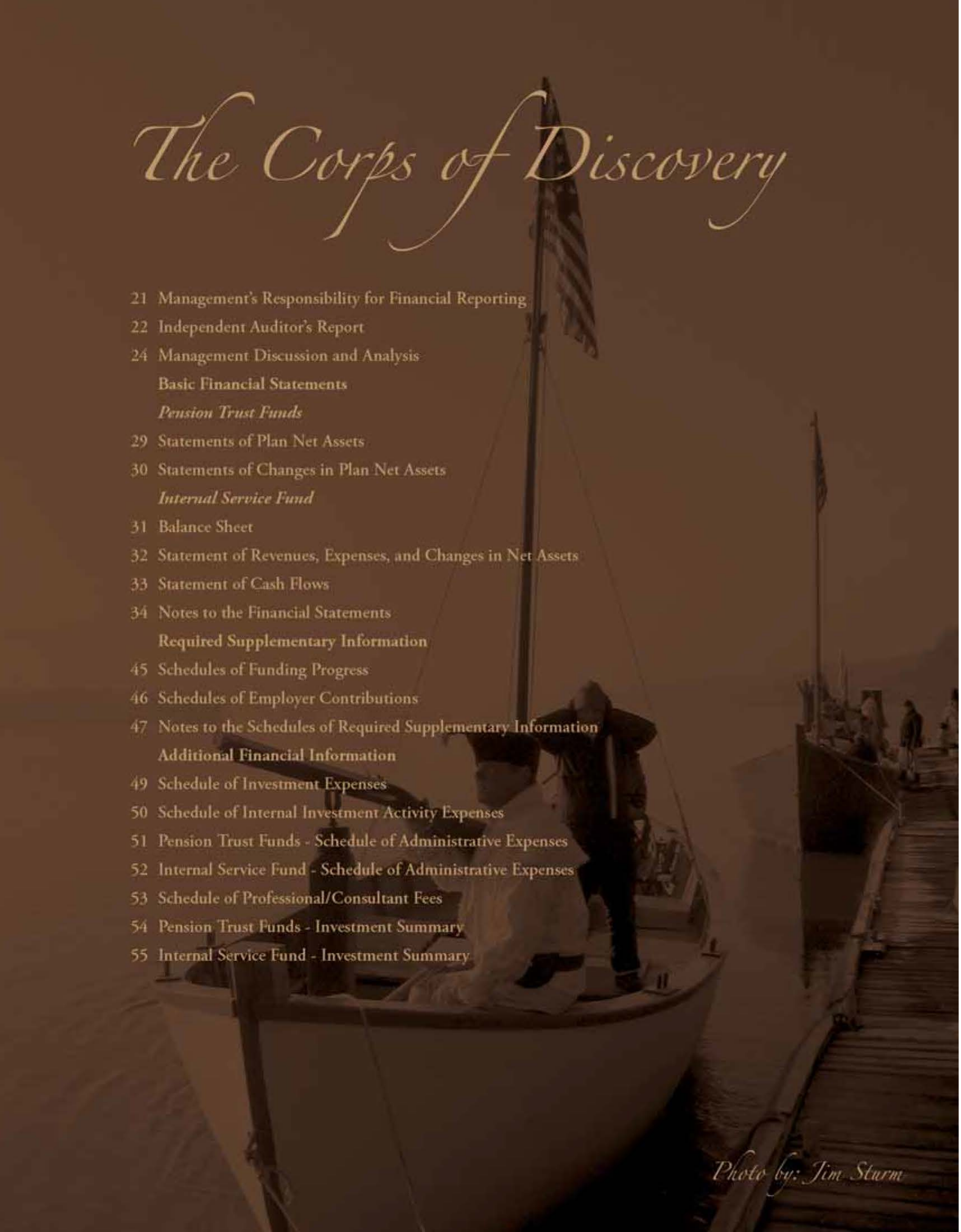
***Silver Lake Partners***
Alan Austin, David Roux
Menlo Park, California

***Trust Company of the West***
Art Carlson, Judy Hirsch
Los Angeles, California

***Wayzata Investment Partners, LLC***
Pat Halloran, Steve Adams
Wayzata, Minnesota

# The Corps of Discovery

After President Thomas Jefferson won approval from Congress, $2,500 was appropriated to fund a small expeditionary group, known as The Corps of Discovery, which was comprised of civilian hunters, army soldiers, and French boatmen. While not all made the entire journey to the Pacific, some 48 men were part of the team when it left St. Louis heading up the Missouri River. The expedition included Clark's slave, York, along with many other adventurers who came to play a major role in the American expansion. Later in their journey, they were joined by Sacagawea, a Shoshone woman who served as an interpreter.



# The Corps of Discovery


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*Photo by: Jim Sturm*

# Management's Responsibility for Financial Reporting

MOSERS®

September 30, 2004

Management has prepared the basic financial statements of the Missouri State Employees' Retirement System (MOSERS), and is responsible for the integrity and fairness of the information presented. Some amounts included in the financial statements may be based on estimates and judgments. These estimates and judgments were made utilizing the best business practices available. The accounting policies followed in the preparation of these basic financial statements conform with generally accepted accounting principles. Financial information presented throughout the annual report is consistent with the basic financial statements.

Ultimate responsibility for the basic financial statements and annual report rests with the board of trustees. The executive director and the rest of MOSERS staff assist the board in its responsibilities. Systems of internal control and supporting procedures are maintained to provide assurance that transactions are authorized, assets safeguarded, and proper records maintained. These controls include standards in hiring and training of employees, the establishment of an organizational structure, and the communications of policies and guidelines throughout the organization. These internal controls are reviewed by internal audit programs. All internal audit reports are submitted to the board of trustees.

The system's external auditors, KPMG LLP, have conducted an independent audit of the basic financial statements in accordance with generally accepted auditing standards. This audit is described in their Independent Audit Report on pages 22-23. Management has provided the external auditors with full and unrestricted access to MOSERS' staff to discuss their audit and related findings as to the integrity of the plan's financial reporting and the adequacy of internal controls for the preparation of financial statements.

| | |
|---|---|
| Gary Findlay | Gary Irwin |
| Executive Director | Chief Financial Officer |

# Independent Auditors' Report

KPMG LLP
Suite 1000
1000 Walnut Street
Kansas City, MO 64106-2162

**Independent Auditors' Report**

The Board of Trustees
Missouri State Employees' Retirement System

We have audited the accompanying basic financial statements of the Missouri State Employees' Retirement System (MOSERS), a component unit of the state of Missouri, as of and for the year ended June 30, 2004, as listed in the accompanying table of contents. We have also audited the financial statements of MOSERS' Internal Service Fund as of and for the year ended June 30, 2004, as displayed in MOSERS' basic financial statements. These financial statements are the responsibility of MOSERS' management. Our responsibility is to express opinions on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe our audit provides a reasonable basis for our opinions.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of MOSERS, as well as MOSERS Internal Service Fund, as of June 30, 2004, and the respective changes in financial position and cash flows, where applicable, thereof for the year then ended, in conformity with accounting principles generally accepted in the United States of America.

As discussed in note 2, MOSERS adopted the provisions of Governmental Accounting Standards Board Statement No. 40, *Deposit and Investment Risk Disclosures*.

Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplementary management discussion and analysis on pages 24-28 and the supplementary schedules of funding progress and employer contributions on pages 45-48 are not a required part of the basic financial statements of the MOSERS, but are supplementary information required by accounting principles generally accepted in the United States of America. The supplementary information included on pages 49-55 is presented for purposes of additional analysis and is not a required part of the basic financial statements of MOSERS.

The information included on pages 49-55 has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated, in all material respects, in relation to the basic financial statements taken as a whole. For the supplementary management discussion and analysis and supplementary schedules of funding progress and employer contributions, we have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on it. The introductory, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we express no opinion on them.

KPMG LLP

Kansas City, Missouri
September 3, 2004

# Required Supplementary Information

## Management Discussion and Analysis

The basic financial statements contained in this section of the Comprehensive Annual Financial Report consist of:

The ***Statements of Plan Net Assets***, which reports the pension trust funds assets, liabilities, and resultant net assets where Assets – Liabilities = Net Assets available at the end of the fiscal year. It can be thought of as a snap shot of the financial position of the pension trust funds of MOSERS at that specific point in time.

The ***Statements of Changes in Plan Net Assets***, which summarizes the pension fund financial transactions that occurred during the fiscal year where Additions – Deductions = Net Change in Net Assets. It supports the change that has occurred to the prior year's net asset value on the *Statement of Plan Net Assets*.

The ***Balance Sheet*** of the Internal Service Fund is similar to the *Statement of Plan Net Assets* in that it also is a snap shot of the financial position of the Internal Service Fund where Assets = Liabilities + Net Assets.

The ***Statement of Revenues, Expenses, and Changes in Net Assets*** of the Internal Service Fund is similar to the *Statement of Changes in Plan Net Assets* in that it also reports the financial activity that occurred over the period of the fiscal year where Revenues – Expenses = Net Revenue and supports the change to the prior years net assets.

The ***Statement of Cash Flows*** of the Internal Service Fund reports the financial transactions for the fiscal year of the Internal Service Fund on a cash basis. It is similar to the *Statement of Revenues, Expenses and Changes in Net Assets*; however, the focus of this statement is on the change to cash balances with accrued income and accrued expense items eliminated.

The ***Notes to the Financial Statements*** are an integral part of the above financial statements and include additional information not readily evident in the statements themselves.

This *Required Supplementary Management Discussion and Analysis* information and the required supplementary information and other schedules following the *Notes to the Financial Statements* provide historical and detailed information considered useful in evaluating the condition of the plans administered by MOSERS.

Pages 25-28 contain summary comparative statements of MOSERS' pension trust funds and Internal Service Fund and provide additional analysis of the changes noted on those schedules.

# Pension Trust Funds

## Summary Comparative Statements of Plan Net Assets

| | As of June 30, 2004 | As of June 30, 2003 | Amount of Change | Percentage Change |
|---|---|---|---|---|
| Cash and short-term investments | $ 277,416,406 | $ 305,694,180 | $ (28,277,774) | (9.25)% |
| Receivables | 176,080,273 | 180,555,167 | (4,474,894) | (2.48) |
| Investments | 5,659,545,870 | 4,995,925,367 | 663,620,503 | 13.28 |
| Invested securities lending collateral | 1,188,833,864 | 1,257,555,834 | (68,721,970) | (5.46) |
| Capital assets | 3,615,140 | 3,611,242 | 3,898 | 0.11 |
| Other assets | 24,732 | 47,143 | (22,411) | (47.54) |
| **Total assets** | 7,305,516,285 | 6,743,388,933 | 562,127,352 | 8.34 |
| Administrative expense payables | 2,225,818 | 2,128,236 | 97,582 | 4.59 |
| Investment purchase payables | 179,856,429 | 248,794,828 | (68,938,399) | (27.71) |
| Securities lending collateral | 1,188,424,688 | 1,257,336,137 | (68,911,449) | (5.48) |
| Other liabilities | 20,078,563 | 283,605 | 19,794,958 | 6979.76 |
| **Total liabilities** | 1,390,585,498 | 1,508,542,806 | (117,957,308) | (7.82) |
| **Net assets** | $ 5,914,930,787 | $ 5,234,846,127 | $ 680,084,660 | 12.99 |

## Summary Comparative Statements of Plan Net Assets Analysis

The decrease in cash and short-term investments is primarily attributable to normal fluctuations in the short-term investments. For the year ended June 30, 2004, the month-end balance of short-term investments ranged from a low of $238,716,850 in July 2003 to a high of $362,149,803 in April 2004 with an average balance of $287,059,249 for the year.

The decrease in receivables is attributable to normal fluctuations in investment income receivables during the year. For the year ended June 30, 2004, the month-end balance of investment income receivables ranged from a low of $15,852,060 in April 2004 to a high of $33,722,484 in July 2003 with an average receivable balance of $23,794,965.

The increase in the fair value of investments is primarily attributable to the favorable market conditions experienced during FY04 as evidenced by MOSERS' total investment return for the year of 17.1%. Detailed information regarding MOSERS' investment portfolio is included in the investment section of this report.

The decrease in security lending collateral is due to normal fluctuations in the lending program. The month-end collateral balances ranged from a low of $1,188,424,687 in July 2004 to a high of $1,463,944,295 in March 2004 with an average balance of $1,310,652,894 for the year. The investment of the collateral fluctuated in a similar manner except that, since a portion of the collateral is invested in corporate bonds, the invested collateral benefited from the market gains on those bonds.

The decrease in investment purchases payable is due to normal fluctuations in the amount of security purchases pending settlement at month-end. For the year ended June 30, 2004, the month-end balances of the investment purchase payables ranged from a low of $123,927,210 in April 2004 to a high of $219,926,893 in December 2003 with an average balance of $164,802,090.

The increase in other liabilities is primarily attributable to the accrual of the new investment manager incentive fees of $19,776,836. The amount represents the portion of the incentive fee calculated as earned through June 30, 2004, to be paid in the future subject to the investment manager's attainment of certain long-term performance measures.

## Summary Comparative Statements of Changes in Plan Net Assets

| | As of June 30, 2004 | As of June 30, 2003 | Amount of Change | Percentage Change |
|---|---|---|---|---|
| Contributions | $ 189,866,977 | $ 182,073,252 | $ 7,793,725 | 4.28% |
| Investment income (loss) investing activities | 877,901,329 | 331,739,686 | 546,161,643 | 164.64 |
| Investment income securities lending activities | 4,036,654 | 3,956,537 | 80,117 | 2.02 |
| Miscellaneous income | 474,339 | 441,249 | 33,090 | 7.50 |
| **Total additions** | 1,072,279,299 | 518,210,724 | 554,068,575 | 106.92 |
| Benefits | 385,909,723 | 337,451,395 | 48,458,328 | 14.36 |
| Service transfers and refunds | 537,762 | 2,191,487 | (1,653,725) | (75.46) |
| Administrative expenses | 5,747,154 | 6,004,361 | (257,207) | (4.28) |
| **Total deductions** | 392,194,639 | 345,647,243 | 46,547,396 | 13.47 |
| **Net increase (decrease)** | 680,084,660 | 172,563,481 | 507,521,179 | 294.11 |
| **Net assets beginning of year** | 5,234,846,127 | 5,062,282,646 | 172,563,481 | 3.41 |
| **Net assets end of year** | $ 5,914,930,787 | $ 5,234,846,127 | $ 680,084,660 | 12.99 |

## Summary Comparative Statements of Changes in Plan Net Assets Analysis

The increase in contributions received is primarily attributable to an increase in the contribution rate for the general employees group from 8.51% to 9.35% offset by a reduction in the state's payroll of approximately $2,400,000.

Investment income increased primarily as a result of the continuation of the favorable market conditions that began towards the end of FY03 as the economy continued to show signs of improvement. Security lending income increased primarily due to an increase in lendable treasury securities.

Additional information regarding the security lending activity can be found in the investment section of this report.

Benefit payments increased due to changes in benefit rolls for the year. Detailed schedules of these changes can be found on pages 110-117 of the Actuarial Section of this report.

Service transfers decreased primarily due to a one-time transfer of $2,050,813 from MOSERS to the MoDOT & Patrol Employees' Retirement System (formally known as the Highway Transportation Employees' and Highway Patrol Retirement System of Missouri) that occurred in the fiscal year ended June 30, 2003.

Administration expenses decreased primarily due to a decrease in depreciation expense of $196,643. A portion of MOSERS' capital assets became fully depreciated last year, thus resulting in no depreciation expense recorded this year for those assets. Printing charges decreased by $66,453 primarily due to a reduction in the quantity of annual reports, brochures and handbooks that required printing this year.

# Internal Service Fund

### Summary Comparative Balance Sheets

| | As of June 30, 2004 | As of June 30, 2003 | Amount of Change | Percentage Change |
|---|---|---|---|---|
| Premiums receivable | $ 1,065,315 | $ 1,031,950 | $ 33,365 | 3.23% |
| Investments | 1,762,813 | 1,749,617 | 13,196 | 0.75 |
| **Total assets** | 2,828,128 | 2,781,567 | 46,561 | 1.67 |
| Premiums payable | 2,387,345 | 2,338,210 | 49,135 | 2.10 |
| Other liabilities | 123,422 | 112,798 | 10,624 | 9.42 |
| **Total liabilities** | 2,510,767 | 2,451,008 | 59,759 | 2.44 |
| **Unrestricted Net Assets** | 317,361 | 330,559 | (13,198) | (3.99) |
| **Total liabilities and net assets** | $ 2,828,128 | $ 2,781,567 | $ 46,561 | 1.67 |

### Summary Comparative Balance Sheet Analysis

Premium receivables and payables increased due to normal fluctuations in the amount of insurance coverage provided to state employees. Likewise, the investment of those premiums until paid to the insurance company also increased.

Other liabilities increased primarily due to reimbursements due to the pension trust funds for the internal service funds portion of shared expenses and for attorney fees related to long-term disability issues.

### Summary Comparative Statements of Revenues, Expenses, and Changes in Net Assets

| | As of June 30, 2004 | As of June 30, 2003 | Amount of Change | Percentage Change |
|---|---|---|---|---|
| Premium receipts | $ 25,771,703 | $ 25,223,043 | $ 548,660 | 2.18% |
| Miscellaneous income | 436,489 | 436,494 | (5) | 0.00 |
| **Total operating revenue** | 26,208,192 | 25,659,537 | 548,655 | 2.14 |
| Premium disbursements | 25,736,083 | 25,169,883 | 566,200 | 2.25 |
| Premium refunds | 35,620 | 53,160 | (17,540) | (32.99) |
| Administrative expenses | 474,040 | 421,507 | 52,533 | 12.46 |
| **Total operating expenses** | 26,245,743 | 25,644,550 | 601,193 | 2.34 |
| Net operating income (loss) | (37,551) | 14,987 | (52,538) | (350.56) |
| Investment income | 24,353 | 31,179 | (6,826) | (21.89) |
| **Net revenues over expenses** | (13,198) | 46,166 | (59,364) | (128.59) |
| **Net assets beginning of year** | 330,559 | 284,393 | 46,166 | 16.23 |
| **Net assets end of year** | $ 317,361 | $ 330,559 | $ (13,198) | (3.99) |

### Summary Comparative Statements of Revenues, Expenses, and Changes in Net Assets Analysis

Premium receipts and disbursements increased due to normal fluctuations in the amount of insurance coverage provided to state employees.

Refunds decreased as MOSERS continued to work with the state of Missouri to identify and resolve issues with the state's new payroll/accounting system implemented in FY01, taking advantage of some process improvements that resulted in a reduction in deduction errors requiring refunds.

Administrative expenses increased primarily due to increase in salaries of $34,059 and an increase of attorney fees in the amount of $15,957 related to long-term disability issues.

Investment income decreased primarily due to a decline in the interest earned on the overnight repurchase agreements, which is tied to the three-month Treasury note rate.

## Summary Comparative Statements of Cash Flows

| | As of June 30, 2004 | As of June 30, 2003 | Amount of Change | Percentage Change |
|---|---|---|---|---|
| Cash flows from operating activities | $ (10,695) | $ 114,783 | $ (125,478) | (109.32)% |
| Cash flows from noncapital financing activities | (462) | (2,500) | 2,038 | (81.52) |
| Cash flows from investing activities | 11,157 | (112,283) | 123,440 | (109.94) |
| **Net change in cash** | 0 | 0 | 0 | |
| **Cash balances beginning of year** | 0 | 0 | 0 | |
| **Cash balances end of year** | $ 0 | $ 0 | $ 0 | |

## Summary Comparative Statements of Cash Flows Analysis

The decrease in cash flows from operating activities is primarily attributable to an increase in cash flow premium payments to the insurance company over the cash receipt of premiums from the state during the year.

The increase in cash flows from noncapital financing activities is attributable to the lower volume of refund checks issued during the year, which resulted in a lower volume of checks that remained outstanding at the end of the year.

The increase in cash flows from investing activities is primarily attributable to the increase in the amount of premiums processed during the year, which resulted in an increase of $130,266 in the net cash flows from the overnight repurchase agreements. The increase was offset by a $6,826 reduction in the income earned on the overnight repurchase agreements.

# Statements of Plan Net Assets

## Pension Trust Funds - As of June 30, 2004

| | MSEP | ALJLAP | Judicial Plan | Total |
|---|---|---|---|---|
| **Assets** | | | | |
| Cash and short-term investments | $ 274,854,578 | $ 737,395 | $ 1,824,433 | $ 277,416,406 |
| Receivables | | | | |
| State contributions | 8,098,250 | 39,748 | 865,222 | 9,003,220 |
| Investment income | 26,309,267 | 70,584 | 174,636 | 26,554,487 |
| Investment sales | 139,108,233 | 373,207 | 923,374 | 140,404,814 |
| Other | 116,665 | 313 | 774 | 117,752 |
| Total receivables | 173,632,415 | 483,852 | 1,964,006 | 176,080,273 |
| Investments at fair value | | | | |
| U.S. treasury securities | 1,040,394,634 | 2,791,228 | 6,905,943 | 1,050,091,805 |
| Corporate bonds | 404,529,923 | 1,085,295 | 2,685,193 | 408,300,411 |
| Convertible bonds | 15 | 0 | 0 | 15 |
| Government bonds & gov't mortgage-backed securities | 166,800,023 | 447,500 | 1,107,187 | 168,354,710 |
| Real estate equity | 6,333,745 | 16,993 | 42,042 | 6,392,780 |
| Common stock | 1,406,909,800 | 3,774,536 | 9,338,801 | 1,420,023,137 |
| International EAFE index fund | 169,498,988 | 454,741 | 1,125,102 | 171,078,831 |
| Preferred stock | 16,010,677 | 42,954 | 106,276 | 16,159,907 |
| Limited partnerships | 1,233,626,906 | 3,309,643 | 8,188,582 | 1,245,125,131 |
| Real estate investment trust | 153,730,062 | 412,436 | 1,020,431 | 155,162,929 |
| Collateralized mortgage obligation | 43,321,192 | 116,224 | 287,558 | 43,724,974 |
| Foreign currency | 7,469,966 | 20,041 | 49,584 | 7,539,591 |
| International equities | 922,041,643 | 2,473,705 | 6,120,338 | 930,635,686 |
| U.S. dollar-denominated international corporate bonds | 36,614,690 | 98,232 | 243,041 | 36,955,963 |
| Total investments | 5,607,282,264 | 15,043,528 | 37,220,078 | 5,659,545,870 |
| Securities lending collateral | 1,177,855,466 | 3,160,016 | 7,818,382 | 1,188,833,864 |
| Capital assets | | | | |
| Land | 264,818 | 710 | 1,758 | 267,286 |
| Building and building improvements | 3,320,543 | 8,909 | 22,041 | 3,351,493 |
| Furniture, fixtures, and equipment | 1,880,277 | 5,045 | 12,481 | 1,897,803 |
| Total capital assets | 5,465,638 | 14,664 | 36,280 | 5,516,582 |
| Accumulated depreciation | (1,883,883) | (5,054) | (12,505) | (1,901,442) |
| Net capital assets | 3,581,755 | 9,610 | 23,775 | 3,615,140 |
| Prepaid expenses and other | 24,503 | 66 | 163 | 24,732 |
| Total assets | 7,237,230,981 | 19,434,467 | 48,850,837 | 7,305,516,285 |
| **Liabilities** | | | | |
| Administrative expense payables | 2,205,264 | 5,916 | 14,638 | 2,225,818 |
| Investment purchases payables | 178,195,528 | 478,073 | 1,182,828 | 179,856,429 |
| Securities lending collateral | 1,177,450,069 | 3,158,928 | 7,815,691 | 1,188,424,688 |
| Investment incentive fees payable | 19,594,204 | 52,568 | 130,063 | 19,776,835 |
| Real estate security deposits | 30,959 | 83 | 206 | 31,248 |
| Employee vacation and overtime liability | 267,982 | 719 | 1,779 | 270,480 |
| Total liabilities | 1,377,744,006 | 3,696,287 | 9,145,205 | 1,390,585,498 |
| Net assets held in trust for pension benefits | $5,859,486,975 | $15,738,180 | $39,705,632 | $5,914,930,787 |

(A schedule of funding progress for each plan is presented on page 45.)
See accompanying *Notes to the Financial Statements*.

# Statements of Changes in Plan Net Assets

## Pension Trust Funds - As of June 30, 2004

| | MSEP | ALJLAP | Judicial Plan | Total |
|---|---|---|---|---|
| **Additions** | | | | |
| Contributions | | | | |
| State contributions | $ 164,691,836 | $ 945,950 | $20,636,314 | $ 186,274,100 |
| Member purchases of service credit | 3,426,367 | 0 | 0 | 3,426,367 |
| Service transfer contributions | 166,510 | 0 | 0 | 166,510 |
| Total contributions | 168,284,713 | 945,950 | 20,636,314 | 189,866,977 |
| | | | | |
| Investment income | | | | |
| *From investing activities* | | | | |
| Net appreciation in fair value of investments | 780,183,787 | 2,093,120 | 5,178,712 | 787,455,619 |
| Interest | 106,701,476 | 286,265 | 708,264 | 107,696,005 |
| Dividends | 23,521,415 | 63,105 | 156,131 | 23,740,651 |
| Other | 14,223,178 | 38,159 | 94,410 | 14,355,747 |
| Total investing activity income | 924,629,856 | 2,480,649 | 6,137,517 | 933,248,022 |
| Investing activity expenses: | | | | |
| Management fees | (51,706,993) | (138,722) | (343,221) | (52,188,936) |
| Custody fees | (862,864) | (2,315) | (5,728) | (870,907) |
| Consultant fees | (444,390) | (1,192) | (2,950) | (448,532) |
| Performance measurement fees | (263,782) | (708) | (1,751) | (266,241) |
| Portfolio transition/rebalancing cost | (164,263) | (441) | (1,090) | (165,794) |
| Internal investment activity expenses | (1,382,029) | (3,708) | (9,174) | (1,394,911) |
| Miscellaneous expense | (11,267) | (30) | (75) | (11,372) |
| Total investing activity expenses | (54,835,588) | (147,116) | (363,989) | (55,346,693) |
| Net income from investing activities | 869,794,268 | 2,333,533 | 5,773,528 | 877,901,329 |
| | | | | |
| *From securities lending activities:* | | | | |
| Securities lending income | 17,341,352 | 46,524 | 115,109 | 17,502,985 |
| Securities lending expenses: | | | | |
| Borrower rebates | (12,374,726) | (33,200) | (82,141) | (12,490,067) |
| Management fees | (967,249) | (2,595) | (6,420) | (976,264) |
| Total securities lending activities expenses | (13,341,975) | (35,795) | (88,561) | (13,466,331) |
| Net income from securities lending activities | 3,999,377 | 10,729 | 26,548 | 4,036,654 |
| Total net investment income | 873,793,645 | 2,344,262 | 5,800,076 | 881,937,983 |
| | | | | |
| Miscellaneous income | 469,959 | 1,261 | 3,119 | 474,339 |
| Total additions | 1,042,548,317 | 3,291,473 | 26,439,509 | 1,072,279,299 |
| | | | | |
| **Deductions** | | | | |
| Benefits | 317,554,338 | 1,003,355 | 17,658,269 | 336,215,962 |
| Benefit adjustments | 49,693,761 | 0 | 0 | 49,693,761 |
| Service transfer payments | 529,177 | 0 | 0 | 529,177 |
| Contribution refunds | 8,585 | 0 | 0 | 8,585 |
| Administrative expenses | 5,694,082 | 15,276 | 37,796 | 5,747,154 |
| Total deductions | 373,479,943 | 1,018,631 | 17,696,065 | 392,194,639 |
| Net increase (decrease) | 669,068,374 | 2,272,842 | 8,743,444 | 680,084,660 |
| | | | | |
| Net assets held in trust for pension benefits: | | | | |
| Beginning of year | 5,190,418,601 | 13,465,338 | 30,962,188 | 5,234,846,127 |
| End of year | $5,859,486,975 | $15,738,180 | $39,705,632 | $5,914,930,787 |

See accompanying *Notes to the Financial Statements*.

# Balance Sheet

## Internal Service Fund - As of June 30, 2004

| | |
|---|---|
| **Assets** | |
| Premiums receivable | $ 1,065,315 |
| Investments at fair value | 1,762,813 |
| Total assets | $ 2,828,128 |
| | |
| **Liabilities and net assets** | |
| *Liabilities* | |
| Premiums payable | $ 2,387,345 |
| Checks outstanding net of deposits | 2,558 |
| Other | 120,864 |
| Total liabilities | 2,510,767 |
| Unrestricted net assets | 317,361 |
| Total liabilities and net assets | $ 2,828,128 |

See accompanying *Notes to the Financial Statements*.

# Statement of Revenues, Expenses, and Changes in Plan Net Assets

## Internal Service Fund - As of June 30, 2004

| | |
|---|---|
| **Operating revenues** | |
| Premium receipts | $ 25,771,703 |
| Miscellaneous income | 436,489 |
| Total operating revenues | 26,208,192 |
| **Operating expenses** | |
| Premium disbursements | 25,736,083 |
| Premium refunds | 35,620 |
| Administrative expenses | 474,040 |
| Total operating expenses | 26,245,743 |
| Operating revenues under operating expenses | (37,551) |
| **Non-operating revenues** | |
| Investment income | 24,353 |
| Net revenues under expenses | (13,198) |
| Net assets July 1, 2003 | 330,559 |
| Net assets June 30, 2004 | $ 317,361 |

See accompanying *Notes to the Financial Statements*.

# Statement of Cash Flows

## Internal Service Fund - Year Ended June 30, 2004

| | |
|---|---|
| **Cash flows from operating activities** | |
| Cash received from employer and members | $ 26,174,772 |
| Premium payments to outside carriers | (25,686,476) |
| Refunds of premiums to members | (35,620) |
| Cash payments to employees for services | (242,107) |
| Cash payments to other suppliers of goods and services | (221,264) |
| Net cash used in operating activities | (10,695) |
| **Cash flows from noncapital financing activities** | |
| Implicit funding of checks outstanding net of deposits | 2,558 |
| Implicit repayment of prior years checks outstanding net of deposits | (3,020) |
| Net cash used in noncapital financing activities | (462) |
| **Cash flows from investing activities** | |
| Purchase of investment securities | (499,097,692) |
| Proceeds from sale and maturities of investment securities | 499,084,496 |
| Cash received from investment income | 24,353 |
| Net cash provided by investing activities | 11,157 |
| Net increase in cash | 0 |
| Cash balances June 30, 2003 | 0 |
| Cash balances June 30, 2004 | $ 0 |
| **Reconciliation of operating revenues under operating expenses to net cash used in operating activities** | |
| Operating revenues under operating expenses | $ (37,551) |
| Adjustments to reconcile operating revenues under operating expenses to net cash used in operating activities: | |
| Change in assets and liabilities: | |
| Increase in operational accounts receivable | (33,368) |
| Increase in operational accounts payable | 60,224 |
| Total adjustments | 26,856 |
| Net cash used in operating activities | $ (10,695) |

See accompanying *Notes to the Financial Statements*.

# Notes to the Financial Statements

June 30, 2004

## (1) PLAN DESCRIPTIONS

**Missouri State Employees' Plan (MSEP)**
The MSEP is a single-employer, public employee retirement plan with two benefit structures known as the MSEP (closed plan) and MSEP 2000 (new plan) which are administered by the Missouri State Employees' Retirement System (MOSERS) in accordance with Sections 104.010 and 104.312 to 104.1215 of the Revised Statutes of Missouri (RSMo). As established under Section 104.320, RSMo, MOSERS is a body corporate and an instrumentality of the state. In the system are vested the powers and duties specified in sections 104.010 and 104.312 to 104.1215, RSMo and such other powers as may be necessary or proper to enable it, its officers, employees, and agents to carry out fully and effectively all the purposes of sections 104.010 and 104.312 to 104.1215, RSMo.

Responsibility for the operation and administration of the system is vested in MOSERS' board of trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the MSEP is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Generally, all full-time state employees hired before July 2000 who were not covered under another state-sponsored retirement plan are eligible for membership in the MSEP (closed plan). All full-time state employees hired after July 2000 are eligible for membership in the MSEP 2000 (new plan). MOSERS participates as an employer in the MSEP plan.

As of June 30, 2004, membership in the MSEP consisted of the following:

| | | |
|---|---|---|
| Retirees and beneficiaries currently receiving benefits | | 24,757 |
| Terminated employees entitled to, but not yet receiving benefits | | 13,796 |
| **Active:** | | |
| Vested | 35,664 | |
| Non-vested | 20,250 | 55,914 |
| **Total membership** | | 94,467 |

The MSEP provides retirement, survivor, and disability benefits.

**MSEP (closed plan)**
General state employees are fully vested for benefits upon receiving five years of credited service. Under the MSEP (closed plan), general employees may retire with full benefits upon the earliest of attaining:

- Age 65 and active with 4 years of service;
- Age 65 with 5 years of service;
- Age 60 with 15 years of service or
- Age 48 with age and service equaling 80 or more (Rule of 80).

General employees may retire early at age 55 with at least 10 years of service with reduced benefits.

The base benefit in the general employee plan is equal to 1.6% multiplied by the final average pay multiplied by years of credited service.

For members hired prior to August 28, 1997, cost-of-living adjustments (COLAs) are provided annually based on 80% of the change in the consumer price index (CPI) with a minimum rate of 4%, and maximum rate of 5%, until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter, the 4% minimum rate is eliminated. For members hired on or after August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI up to a maximum rate of 5%.

Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least five, but less than ten years of service, be less than age 60, and have a benefit present value of less than $10,000.

**MSEP 2000 (new plan)**
General state employees are fully vested for benefits upon receiving five years of credited service. Under the MSEP 2000 (new plan), general employees may retire with full benefits upon the earliest of attaining:

- Age 62 with 5 years of service; or
- Age 48 with age and service equaling 80 or more (Rule of 80).

General employees may retire early at age 57 with at least 5 years of service with reduced benefits.

The base benefit in the general employee plan is equal to 1.7% multiplied by final average pay multiplied by years of credited service. For those retiring under Rule of 80, an additional temporary benefit equivalent to 0.8% multiplied by final average pay multiplied by years of credited service is payable until age 62.

COLAs are provided annually based on 80% of the change in the CPI up to a maximum rate of 5%.

For a more detailed summary of benefits for general employees and a description of benefits available to legislators and elected officials under the MSEP (closed plan) and the MSEP 2000 (new plan), refer to the *Summary of Plan Provisions* contained in the Actuarial Section of this report.

The state of Missouri is required to make all contributions to the MSEP. Prior to September 1, 1972, contributions by members were required. Accumulated employee contributions made prior to that time, plus interest through August 28, 1997, are refundable to the member or designated beneficiaries upon request.

**Administrative Law Judges and Legal Advisors' Plan (ALJLAP)**
The Administrative Law Judges and Legal Advisors' Plan (ALJLAP) is a single-employer, public employee retirement plan administered in accordance with Sections 287.812 to 287.856, RSMo. Responsibility for the operation and administration of the system is vested in MOSERS' board of trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the ALJLAP is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Individuals appointed or employed as administrative law judges or legal advisors in the Division of Workers' Compensation, members of the Labor and Industrial Relations Commission and their attorneys, the chairperson of the State Board of Mediation, and administrative hearing commissioners are eligible for membership in the ALJLAP.

On June 30, 2004, membership in the ALJLAP consisted of the following:

| | | |
|---|---|---|
| Retirees and beneficiaries currently receiving benefits | | 25 |
| Terminated employees entitled to, but not yet receiving benefits | | 29 |
| **Active:** | | |
| Vested | 57 | |
| Nonvested | 0 | 57 |
| **Total membership** | | 111 |

The ALJLAP provides retirement, death, and disability benefits. Members are immediately eligible for benefits.

Under the ALJLAP, members may retire with full benefits upon the earliest of attaining:

- Age 62 with 12 years of service;
- Age 60 with 15 years of service; or
- Age 55 with 20 years of service.

Employees may retire early at age 65 with less than 12 years of service with a reduced benefit that is based upon years of service relative to 12 years.

In the ALJLAP, the base benefit for members with 12 or more years of service is equivalent to 50% of the average highest 12 consecutive months of salary.

For members hired prior to August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI with a minimum rate of 4%, and maximum rate of 5%, until the cumulative amount of COLAs equals 65% of

the original benefit. Thereafter, the 4% minimum rate is eliminated. For members hired on or after August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI up to a maximum rate of 5%.

Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least five, but less than ten years of service, be less than age 60, and have a benefit present value of less than $10,000.

For a more detailed summary of benefits for members of the ALJLAP, refer to the *Summary of Plan Provisions* contained in the Actuarial Section of this report.

The state of Missouri is required to make all contributions to the ALJLAP.

**Judicial Plan**
The Judicial Plan is a single-employer, public employee retirement plan administered in accordance with Sections 476.445 to 476.690, RSMo. Responsibility for the operation and administration of the Judicial Plan is vested in MOSERS' board of trustees. Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the Judicial Plan is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as a pension trust fund.

Judges and commissioners of the supreme court or the court of appeals, judges of the circuit court, probate court, magistrate court, court of common pleas, court of criminal corrections, or a justice of the peace, or a commissioner or deputy commissioner of the circuit court appointed after February 29, 1972 are eligible for membership in the Judicial Plan.

On June 30, 2004, membership in the Judicial Plan consisted of the following:

| | | |
|---|---|---|
| Retirees and beneficiaries currently receiving benefits | | 397 |
| Terminated employees entitled to, but not yet receiving benefits | | 73 |
| **Active:** | | |
| Vested | 391 | |
| Nonvested | 0 | 391 |
| **Total membership** | | 861 |

The Judicial Plan provides retirement, death, and disability benefits. Members are immediately eligible for benefits.

Under the Judicial Plan, members may retire with full benefits upon the earliest of attaining:

- Age 62 with 12 years of service;
- Age 60 with 15 years of service; or
- Age 55 with 20 years of service.

Employees may retire early at age 62 with less than 12 years of service or age 60 with less than 15 years of service with a reduced benefit that is based upon years of service relative to 12 or 15 years.

In the Judicial Plan, the base benefit for members with 12 or more years of service is equivalent to 50% of compensation on the highest court served.

For members hired prior to August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI with a minimum rate of 4%, and maximum rate of 5%, until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter, the 4% minimum rate is eliminated. For members hired on or after August 28, 1997, COLAs are provided annually based on 80% of the change in the CPI up to a maximum rate of 5%.

Qualified, terminated-vested members may make a one-time election to receive the present value of their benefit in a lump sum payment. To qualify, a member must have terminated with at least 5, but less than 10 years of service, be less than age 60, and have a benefit present value of less than $10,000.

For a more detailed summary of benefits for members of the Judicial Plan, refer to the *Summary of Plan Provisions* contained in the Actuarial Section of this report.

Funding of the Judicial Plan on an actuarial basis began on July 1, 1998. The state of Missouri is required to make all contributions to the Judicial Plan.

**Missouri State Insurance Plan**
The Missouri State Insurance Plan is accounted for as an internal service fund of the state of Missouri and is administered by MOSERS. It provides basic life insurance in an amount equal to one-times annual salary while actively employed (with a $15,000 minimum) to:

- Eligible members of the MSEP and MSEP 2000 (except employees of the Missouri Department of Conservation, and certain state colleges and universities);
- Members of the Judicial Plan;
- Members of the ALJLAP; and
- Certain members of the Public School Retirement System

The plan also provides duty-related death benefits, optional life insurance for active employees and retirees who are eligible for basic coverage, and a long-term disability plan for certain eligible members. For a more detailed description of insurance benefits, refer to the *Summary of Plan Provisions- Life Insurance Plans* in the Actuarial Section of this report.

Due to the nature of MOSERS' reliance on funding from the state of Missouri and the overall control of the plan document by the legislative and executive branches of state government, the Missouri State Insurance Plan is considered a component unit of the state of Missouri financial reporting entity and is included in the state's financial reports as an internal service fund.

## (2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND PLAN ASSET MATTERS

**Basis of Accounting**
The financial statements of the MSEP, the ALJLAP, the Judicial Plan, and the Missouri State Insurance Plan were prepared using the accrual basis of accounting.
Contributions are due to MOSERS when employee services have been performed and paid. Contributions are recognized as revenues when due, pursuant to statutory requirements. Benefits and refunds are recognized when due and payable and expenses are recorded when the corresponding liabilities are incurred, regardless of when contributions are received or payment is made. The direct method of reporting cash flows is used.

The system opted for early implementation of GASB Statement No. 40, Deposit and Investment Risk Disclosures, issued in March 2003. This pronouncement requires additional disclosures presented in these notes but has no impact on the system's net assets. These disclosures address common deposit and investment risks related to credit risk, concentration of credit risk, interest rate risk, and foreign currency risk. Included as an element of interest rate risk, Statement No. 40 requires disclosures of investments that have fair values that are highly sensitive to changes in interest rates.

**Cash**
Custodial credit risk for deposits is the risk that in the event of a bank failure, the system and plans' deposits may not be returned to them. The deposits are held in one financial institution with a balance of up to $100,000 insured by the Federal Deposit Insurance Corporation (FDIC). The system mitigates custodial credit risk for deposits by requiring the bank to pledge securities from an acceptable list in an amount over the FDIC insured amount of at least equal in market value to 100% of the aggregate amount of the deposits. These securities are required to be delivered to a third party institution mutually agreed upon by the bank and MOSERS.

Cash balances represent both operating cash accounts held by the banks and investment cash on deposit with the investment custodian. To maximize investment income, the float caused by outstanding checks is invested, thus causing a possible negative book balance. Negative book balances are reflected in the liabilities section of the balance sheet of the internal service fund and included in the cash and short-term investments on the statements of plan net assets of the pension trust funds. The table at the top of the following page is a schedule of the aggregate book and bank balances of all cash accounts. In addition to the FDIC insurance coverage on the accounts of MOSERS, the Central Trust Bank pledged the following securities to MOSERS on June 30, 2004, as collateral for overnight repurchase agreements:

- $1,000,000 FHLMC Discount Note *Maturity Date 09/09/2004*
- $600,277 Small Business Association Pool # 505172 *Maturity Date 08/25/2014*
- $925,553 Small Business Association Pool # 505327 *Maturity Date 01/25/2021*
- $427,069 Small Business Association Pool # 504008 *Maturity Date 12/25/2022*

| | Cash Balances | |
|---|---|---|
| | Book | Banks and Investment Custodian |
| Pension Trust Funds | $(7,251,796) | $7,082 |
| Internal Service Fund | (2,558) | 79 |

**Method Used to Value Investments**
Investments of the pension trust funds and the internal service fund are reported at fair value.

The schedule on page 42 provides a summary of the fair values of the investments as reported on the statements of plan net assets of the pension trust funds and balance sheet of the internal service fund. Fair values for the equity real estate investments are based on appraisals. Fair values of the limited partnership investments are based on valuations of the underlying companies of the limited partnerships as reported by the general partner. Fair value of the commingled funds are determined based on the underlying asset values. The remaining assets are primarily valued by the investment custodian using the last trade price information supplied by various pricing data vendors. On June 30, 2004, the system did not have investments in any one organization, other than those issued by the U.S. government, which represented greater than 5% of plan net assets.

**Credit Risk**
Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to MOSERS. As of June 30, 2004, MOSERS' fixed income assets that are not government guaranteed represented 66% of the fixed income portfolio. In preparing this report, credit risk associated with all fixed income holdings including collateral for repurchase agreements and securities lending collateral has been included. The following tables summarize MOSERS' fixed income portfolio exposure levels and credit qualities.

**Average Credit Quality and Exposure Levels of Nongovernment Guaranteed Securities**

| Fixed Income Security Type | Market Value June 30, 2004 | Percent of All Fixed Income Assets | Weighted Average Credit Quality | Ratings Dispersion Requiring Further Exposure |
|---|---|---|---|---|
| Mortgages | $ 99,885,251 | 3.2% | Agency | None |
| Agencies | 41,468,701 | 1.3 | Agency | None |
| Collateralized mortgage obligations | 137,368,095 | 4.4 | AAA | See below |
| Asset-backed securities | 490,391,815 | 15.6 | AAA | See below |
| Corporate bonds | 914,319,090 | 29.0 | BBB | See below |
| Commercial paper | 327,145,568 | 10.4 | Mid tier 1 & 2 | See below |
| Preferred stock | 942,700 | 0.0 | CCC | None |
| Pooled investments | 66,417,490 | 2.1 | Not rated | None |
| Total | $2,077,938,710 | 66.0% | | |

**Ratings Dispersion Detail**

| Credit Rating Level | Collateralized Mortgage Obligations | Asset-Backed Securities | Corporate Bonds | Commercial Paper |
|---|---|---|---|---|
| Agency | $ 9,415,886 | | | |
| AAA | 127,100,200 | $458,979,249 | $ 89,918,438 | |
| AA | | | 38,634,675 | |
| A | | | 431,123,517 | |
| BBB | | 187,260 | | |
| BB | | | 73,629,832 | |
| B | | 2,621,829 | 192,425,041 | |
| CCC | | | 47,931,580 | |
| CC | | | 2,107,921 | |
| Tier 1 | | 28,603,477 | 30,000,133 | $116,498,953 |
| Tier 2 | | | | 207,143,855 |
| Not rated | 852,009 | | 8,547,951 | 3,502,760 |
| Total | $137,368,095 | $490,391,815 | $914,319,088 | $327,145,568 |

As a matter of practice, there are no overarching limitations for credit risk exposures within the portfolio. Each portfolio is managed in accordance with operational guidelines that are specific as to permissible credit quality ranges, exposure levels within individual quality tiers, and the average credit quality of the overall portfolios. CC is the only rating level from above that is not permissible in any of the guidelines. However, in circumstances where

downgrades occurred subsequent to purchase (as is the case with the current exposure of $2.1 million), investment managers have been given permission to hold the security due to several mitigating circumstances such as a very short maturity or a much higher rating from other rating agencies, among others.

Credit risk for derivative instruments held by the system results from counterparty risk assumed by MOSERS. This is essentially the risk that the borrower will be unable to meet its obligation. Information regarding MOSERS' credit risk related to derivatives is found under the derivatives disclosures found on page 40-41 of these notes.

Policies related to credit risk pertaining to MOSERS' securities lending program is found under the securities lending disclosures found on page 42-43 of these notes.

**Concentration of Credit Risk**
Concentration of credit risk is the risk of loss that may be attributed to the magnitude of a government's investment in a single issue. MOSERS' operational guidelines for each specific portfolio limits investments in any corporate entity to no more than 5% of the market value of the account for both the internally- and externally-managed portfolios.

**Interest Rate Risk**
Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. This risk is managed within the portfolio using the effective duration or option-adjusted methodology. It is widely used in the management of fixed income portfolios in that it quantifies to a much greater degree the risk of interest rate changes. The methodology takes into account optionality on bonds and scales the risk of price changes on bonds depending upon the degree of change in rates and the slope of the yield curve. All of the system's fixed income portfolios are managed in accordance with operational guidelines most of which are quite specific as to the degree of interest rate risk taken. In one instance in which guidelines are less specific as to interest rate risk, and rather implied in the guidelines, it is because credit risk is the predominant risk in the portfolio, and the guidelines are very specific to that point. It is believed that the reporting of effective duration found in the tables below quantifies to the fullest extent possible the interest rate risk of the system's fixed income assets. Floating rate assets that are structurally complex and contain inappropriate coupon adjustment mechanisms are expressly forbidden by the guidelines and are therefore not present in any of the portfolios. Interest rate risks associated with swaps and other derivative instruments are found in the derivatives disclosures on pages 40-41 of these notes.

**Effective Duration of Fixed Income Assets by Security Type**

| Fixed Income Security Type | Market Value June 30, 2004 | Percent of All Fixed Income Assets | Weighted Avg. Effective Duration (years) | Interest Rate Risk Requiring Further Exposure |
|---|---|---|---|---|
| U.S. treasuries | $1,060,768,636 | 33.7% | 7.9 | See below |
| Government guaranteed mortgages | 9,928,006 | 0.3 | 3.1 | None |
| Mortgages | 99,885,251 | 3.2 | 4.0 | None |
| Agencies | 41,468,701 | 1.3 | 0.9 | None |
| Collateralized mortgage obligations | 137,368,095 | 4.4 | 0.3 | None |
| Asset backed securities | 490,391,815 | 15.6 | 0.3 | None |
| Corporate bonds | 914,319,090 | 29.0 | 2.0 | None |
| Commercial paper | 327,145,568 | 10.4 | 0.1 | None |
| Preferred stock | 942,700 | 0.0 | 2.6 | None |
| Pooled investments | 66,417,490 | 2.1 | 0.1 | None |
| Total | $3,148,635,352 | 100.0% | 3.5 | |

**Effective Duration Analysis of U.S. Treasuries**

| Fixed Income Security Type | Market Value 6/30/04 | Average Effective Duration of the Security Type | Contribution Effective Duration |
|---|---|---|---|
| Less than 1 year to maturity | $ 16,155,648 | 0.2 | 0.0 |
| 1 to 10 year maturities | 714,400,584 | 5.1 | 3.4 |
| Long coupon treasuries | 224,259,660 | 11.8 | 2.5 |
| Long stripped treasuries | 105,952,744 | 19.5 | 2.0 |
| | $1,060,768,636 | | 7.9 |

**Foreign Currency Risk**
Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. MOSERS' currency risk exposures, or exchange rate risk, primarily reside within MOSERS' international equity investment holdings. From time to time, MOSERS' external managers may or may not hedge the portfolio's foreign currency exposures with currency forward contracts depending upon their views on a specific foreign currency relative to the U.S. dollar.

MOSERS' exposure to foreign currency risk in U.S. dollars as of June 30, 2004 is highlighted in the table below.

**Currency Exposures by Asset Class**

| Currency | Cash | Equities | Fixed Income | Total |
|---|---|---|---|---|
| Argentina Peso | $ 0 | $ 578,584 | $ 0 | $ 578,584 |
| Australian Dollar | 0 | 7,919,262 | 0 | 7,919,262 |
| Brazilian Real | 0 | 16,916,884 | 0 | 16,916,884 |
| Canadian Dollar | 0 | 19,038,986 | 0 | 19,038,986 |
| Chilean Peso | 0 | 3,628 | 0 | 3,628 |
| Colombian Peso | 0 | 25,082 | 0 | 25,082 |
| Czech Koruna | 0 | 582,076 | 0 | 582,076 |
| Danish Krone | 0 | 17,134,608 | 0 | 17,134,608 |
| Egyptian Pound | 0 | 538,304 | 0 | 538,304 |
| Euro | 33,405,538 | 244,675,267 | 845,436 | 278,926,241 |
| Hong Kong Dollar | 0 | 44,452,212 | 0 | 44,452,212 |
| Hungarian Forint | 0 | 972,771 | 0 | 972,771 |
| Indian Rupee | 0 | 3,479,458 | 0 | 3,479,458 |
| Indonesian Rupiah | 0 | 4,171,433 | 0 | 4,171,433 |
| Israeli Shekel | 0 | 1,593,786 | 0 | 1,593,786 |
| Japanese Yen | 21,560,972 | 255,641,767 | 1,461,446 | 278,664,185 |
| Jordanian Dinar | 0 | 32,841 | 0 | 32,841 |
| Malysian Ringgit | 0 | 5,048,397 | 0 | 5,048,397 |
| Mexican Peso | 0 | 13,724,215 | 51,211 | 13,775,426 |
| New Zealand Dollar | 0 | 357,407 | 919 | 358,326 |
| Norwegian Krone | 0 | 4,880,949 | 0 | 4,880,949 |
| Pakistani Rupee | 0 | 53,246 | 0 | 53,246 |
| Peruvian Nuevo Sol | 0 | 100,491 | 0 | 100,491 |
| Philippines Peso | 0 | 1,145,835 | 0 | 1,145,835 |
| Polish Zloty | 0 | 1,408,579 | 0 | 1,408,579 |
| Russian Ruble | 0 | 10,029 | 0 | 10,029 |
| Singapore Dollar | 0 | 22,453,582 | 0 | 22,453,582 |
| South African Rand | 0 | 15,065,795 | 0 | 15,065,795 |
| South Korean Won | 0 | 31,526,874 | 2,974,420 | 34,501,294 |
| Sri Lanka Rupee | 0 | 1,593 | 0 | 1,593 |
| Swedish Krona | 0 | 20,754,939 | 0 | 20,754,939 |
| Swiss Franc | (27,415) | 71,512,330 | 946 | 71,485,861 |
| Taiwan New Dollar | 0 | 14,049,497 | 0 | 14,049,497 |
| Thai Baht | 0 | 3,840,266 | 0 | 3,840,266 |
| Turkish Lira | 0 | 4,691,099 | 0 | 4,691,099 |
| UK Pound Sterling | (51,332,889) | 273,885,527 | 0 | 222,552,638 |
| Total | $ 3,606,206 | $1,102,267,599 | $5,334,378 | $1,111,208,183 |

**Derivatives**

In accordance with its investment policy, MOSERS, through its external investment managers, holds investments in futures contracts, swap contracts, and forward foreign currency exchange contracts. The tables on the following page summarize the various contracts in the portfolio as of June 30, 2004, which are included in the fair value of investments reported in the *Statement of Plan Net Assets*. As of June 30, 2004, there were no currency forwards in place for direct investments of the system. Interest risks associated with these investments are included in the tables on the following page.

MOSERS does not anticipate additional significant market risk from the swap arrangements. Forward foreign currency exchange contracts are used primarily to hedge against changes in exchange rates related to foreign equities, primarily denominated in European and Asian currencies.

MOSERS could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. MOSERS' investment managers seek to control this risk through counterparty credit evaluations and approvals, counterparty credit limits, and exposure monitoring procedures. MOSERS anticipates that the counterparties will be able to satisfy their obligations under the contracts. Investments in limited partnerships and commingled funds may include derivatives that are not shown in the derivative totals.

MOSERS invests in mortgage-backed securities, which are reported at fair value in the *Statement of Plan Net Assets* of pension trust funds and are based on the cash flows from interest and principal payments by the underlying mortgages. As a result, they are sensitive to prepayments by mortgagees, which is likely in declining interest rate environments, thereby reducing the value of these securities. MOSERS invests in mortgage-backed securities to diversify the portfolio and increase the return while minimizing the extent of risk. Details regarding interest rate risks for these investments are included under the interest rate risk disclosures on page 39.

## Futures Contracts

| Contract | Expiration Date | Long/Short | Fair Value |
|---|---|---|---|
| S & P 500 Index | September 04 | Long | $ 54,454,100 |
| Russell 2000 Index | September 04 | Long | 10,958,475 |
| U.S. treasury bond | September 04 | Long | 12,765,000 |
| U.S. 10-year treasury notes | September 04 | Long | 14,103,328 |
| U.S. 5-year treasury notes | September 04 | Long | 26,411,063 |
| U.S. 2-year treasury notes | September 04 | Long | 32,003,125 |
| Lead | August 04 | Long | 671,925 |
| Gas oil | August 04 | Long | 8,070,850 |
| Gasoline | August 04 | Long | 17,205,388 |
| Lean hogs | August 04 | Long | 4,908,800 |
| Coffee | September 04 | Long | 1,383,638 |
| Cocoa | September 04 | Long | 509,580 |
| Cattle feeder | August 04 | Long | 1,750,400 |
| Live cattle | August 04 | Long | 7,717,500 |
| Soybean | November 04 | Long | 4,716,450 |
| Corn | September 04 | Long | 7,822,500 |
| Wheat | September 04 | Long | 2,887,450 |
| Cotton | December 04 | Long | 2,670,720 |
| Crude oil | August 04 | Long | 51,351,300 |
| Sugar | October 04 | Long | 2,764,709 |
| Heating oil | August 04 | Long | 14,885,199 |
| Brent crude oil | September 04 | Long | 24,428,250 |
| Wheat | September 04 | Long | 6,771,800 |
| Gold | August 04 | Long | 3,969,300 |
| Natural gas | August 04 | Long | 22,219,550 |
| Silver | September 04 | Long | 409,850 |
| Copper (London Metal Exchange) | August 04 | Long | 4,783,625 |
| Zinc | August 04 | Long | 1,033,200 |
| Nickel | August 04 | Long | 2,016,960 |
| Aluminum | August 04 | Long | 6,467,813 |
| MSCI Taiwan Index | July 04 | Long | 3,469,060 |
| Total | | | $ 355,580,908 |

## Swaps

| Type | MOSERS Pays | MOSERS Receives | Maturity Date | Notional | Counterparty Exposure | Counterparty |
|---|---|---|---|---|---|---|
| Cheng Shin Rubber Equity | Libor minus 25 bps | Equity Price/TWD FX Rate | 8/13/2004 | $ 51,107 | $ (2,748) | Morgan Stanley |
| India Index to Libor | Libor minus 145 bps | MSCI India Index in USD | 5/10/2005 | 4,500,000 | (692,462) | Morgan Stanley |
| EMF Index to Libor | Libor minus 75 bps | MSCI EMF Index in USD | 5/10/2005 | 5,000,000 | 127,981 | Morgan Stanley |
| EMF Index to Libor | Libor minus 75 bps | MSCI EMF Index in USD | 5/20/2005 | 2,664,498 | 68,201 | Morgan Stanley |
| Russia Index to Libor | Libor minus 250 bps | MSCI Russia Index in USD | 7/1/2004 | 3,776,120 | (611,577) | Lehman |
| Korea Index to Libor | Libor minus 125 bps | MSCI Korea Index in USD | 8/10/2004 | 7,190,842 | (688,028) | Lehman |
| Lite-On Equity | Libor minus 400 bps | Equity Price/TWD FX Rate | 8/12/2004 | 408,840 | (26,275) | Morgan Stanley |
| Mega Financial Equity | Libor minus 300 bps | Equity Price/TWD FX Rate | 8/12/2004 | 780,279 | (38,500) | Morgan Stanley |
| Sinopac Equity | Libor minus 400 bps | Equity Price/TWD FX Rate | 8/12/2004 | 463,717 | (6,836) | Morgan Stanley |
| BENQ Corp. Equity | Libor minus 400 bps | Equity Price/TWD FX Rate | 8/12/2004 | 653,102 | (120,340) | Morgan Stanley |
| Chile Index to Libor | Libor minus 100 bps | Equity Price/TWD FX Rate | 9/14/2004 | 1,148,656 | 57,875 | Morgan Stanley |
| International Bank | Libor minus 200 bps | Equity Price/TWD FX Rate | 8/12/2004 | 50,159 | (1,246) | Morgan Stanley |
| EMF Index to Libor | Libor minus 30 bps | MSCI EMF Index in USD | 2/3/2005 | 21,368,642 | (57,422) | Lehman |
| Total | | | | $48,055,962 | $(1,991,377) | |

**Securities Lending Program**

The board of trustees' investment policy permits the pension trust funds to participate in a securities lending program. Fixed income, international equity, and domestic equity securities of the pension trust funds are loaned to participating brokers who provide collateral in the form of cash, U.S. Treasury or government agency securities, or letters of credit issued by approved banks. Collateral must be provided in the amount of 102% of market value for domestic loans and 105% of market value for international loans. MOSERS does not have the authority to pledge or sell collateral securities, without borrower default. Securities on loan at fiscal year end for cash collateral and on loan for non-cash collateral are presented in the schedule to the right. On June 30, 2004, MOSERS had no credit risk exposure to borrowers because the collateral amounts received exceeded amounts out on loan.

As of June 30, 2004, Credit Suisse/First Boston, New York Branch (CSFBNY), served as the agent for the fixed income and international equity securities lending programs. In this capacity, MOSERS reduces credit risk by allowing CSFBNY to lend these securities to a diverse group of dealers on behalf of MOSERS. Indemnification against dealer default is provided by CSFBNY, an "AA-rated" bank. With each of MOSERS' securities lending programs, a majority of loans are open loans and can be terminated on demand by either MOSERS or the borrower. Net income from the fixed income and international equity securities lending programs is split on an 85/15 basis between MOSERS and CSFBNY respectively.

**Investments as of June 30, 2004**

| | Pension Trust Funds | | Internal Service Fund | |
|---|---|---|---|---|
| **Type of Investment** | **Investments at Cost Value** | **Investments at Fair Value** | **Investments at Cost Value** | **Investments at Fair Value** |
| **Common stocks** | | | | |
| Out on loan | $ 110,386,943 | $ 86,249,728 | | |
| Not on securities loan | 1,179,812,144 | 1,333,773,409 | | |
| **Total** | **1,290,199,087** | **1,420,023,137** | | |
| **International equities** | | | | |
| Out on loan | 85,916,141 | 58,653,479 | | |
| Not on securities loan | 632,652,295 | 871,982,207 | | |
| **Total** | **718,568,436** | **930,635,686** | | |
| **International corporate bonds** | **36,274,981** | **36,955,963** | | |
| **Preferred stocks** | | | | |
| Out on loan | 29,440 | 20,640 | | |
| Not on securities loan | 14,218,936 | 16,139,267 | | |
| **Total** | **14,248,376** | **16,159,907** | | |
| **Treasury bonds, notes and bills** | | | | |
| Out on loan | 982,586,128 | 971,502,460 | | |
| Not on securities loan | 67,818,688 | 78,589,345 | | |
| **Total** | **1,050,404,816** | **1,050,091,805** | | |
| **Government bonds and gov't mortgage backed securities** | **166,903,812** | **168,354,710** | | |
| **Corporate bonds** | | | | |
| Out on loan | 43,879,540 | 31,522,030 | | |
| Not on securities loan | 1,267,334,412 | 1,283,133,675 | | |
| **Total** | **1,311,213,952** | **1,314,655,705** | | |
| **Convertible bonds** | **1** | **15** | | |
| **Repurchase agreements** | **468,843** | **468,843** | **$1,762,813** | **$1,762,813** |
| **Short-term investment funds** | **566,677,929** | **566,677,929** | | |
| **Collateralized mortgage obligations** | **43,321,452** | **43,724,974** | | |
| **Real estate equity holdings** | **6,392,780** | **6,392,780** | | |
| **Real estate investment trusts** | **126,180,919** | **155,162,929** | | |
| **EAFE index fund** | **179,656,081** | **171,078,831** | | |
| **Foreign currencies** | **7,665,270** | **7,539,591** | | |
| **Limited partnerships** | **1,063,326,954** | **1,245,125,131** | | |
| **Total investments** | | | | |
| Out on loan | 1,222,798,192 | 1,147,948,337 | | |
| Not on securities loan | 5,358,705,497 | 5,985,099,599 | 1,762,813 | 1,762,813 |
| **Total** | **$ 6,581,503,689** | **$7,133,047,936** | **$1,762,813** | **$1,762,813** |

| | |
|---|---|
| **Reconciliation to investments on *Statements of Net Assets*** | |
| **Total from above** | $ 7,133,047,936 |
| **Less short-term investments** | |
| Repurchase agreements | (468,843) |
| Short-term investment funds | (284,199,360) |
| **Less invested securities lending collateral** | |
| Short-term investment funds | (282,478,569) |
| Corporate bonds | (906,355,294) |
| **Investments on *Statement of Plan Net Assets*** | **$ 5,659,545,870** |

As of June 30, 2004, Lehman Brothers, a broker-dealer, was the exclusive borrower of MOSERS' domestic equity securities. In order to reduce credit risk in this exclusive agreement, MOSERS has placed a cap of $250 million on the amount of securities that can be on loan at any given time. In this program, MOSERS receives a monthly borrowing fee of 3 basis points on the market value of the lendable domestic equities multiplied by the following fraction: number of days in the given month divided by 360. The guaranteed fee is renegotiated on a periodic basis to adjust for changes in the securities lending business climate.

Daily monitoring of securities that are on loan ensure proper collateralization levels and mitigate counterparty risk. Cash collateral from all three programs is commingled and invested in a separately managed short-term investment fund for MOSERS. This cash collateral fund is managed by CSFBNY. On June 30, 2004, the cash collateral fund had a market value of $1,188,833,864 and a weighted average maturity of 28 days. For all of the securities lending operational services, the custodian is paid an annual fee, which is netted out against MOSERS' earnings in the securities lending programs managed by Lehman Brothers and CSFBNY.

**Capital Assets**
Office building, furniture, fixtures and equipment costing $250 or more when acquired are capitalized at cost. Improvements, which increase the useful life of the property, are capitalized. Maintenance and repairs are charged to expense as incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the related assets according to the following schedule:

- 5 years for furniture, fixtures, and equipment
- 40 years for building

The table below is a schedule of the capital asset account balances as of June 30, 2003, and June 30, 2004, and changes to those account balances during the year ended June 30, 2004.

**Schedule of Capital Asset Account Balances**

| Capital Assets | Land | Building and Building Improvements | Furniture, Fixtures and Equipment | Total Capital Assets |
|---|---|---|---|---|
| Balances June 30, 2003 | $267,286 | $3,332,605 | $1,914,604 | $5,514,495 |
| Additions | 0 | 18,888 | 257,722 | 276,610 |
| Deletions | 0 | 0 | (274,523) | (274,523) |
| Balances June 30, 2004 | 267,286 | 3,351,493 | 1,897,803 | 5,516,582 |
| **Accumulated Depreciation** | | | | |
| Balances June 30, 2003 | 0 | 401,503 | 1,501,750 | 1,903,253 |
| Depreciation expense | 0 | 84,285 | 160,633 | 244,918 |
| Deletions | 0 | 0 | (246,729) | (246,729) |
| Balances June 30, 2004 | 0 | 485,788 | 1,415,654 | 1,901,442 |
| Net capital assets June 30, 2004 | $267,286 | $2,865,705 | $ 482,149 | $3,615,140 |

## (3) CONTRIBUTIONS AND RESERVES

The MSEP, the ALJLAP, and the Judicial Plan are pension plans covering substantially all state of Missouri employees, administrative law judges and legal advisors in the Division of Workers' Compensation, and judges. The state of Missouri is obligated by state law to make all required contributions to the plans. The required contributions are expressed as a level percentage of covered payroll and are actuarially determined using an individual entry-age actuarial cost method. The unfunded accrued liabilities are amortized over a closed 31-year period. Costs of administering the plans are financed from the assets of the pension trust funds.

## (4) OTHER POST EMPLOYMENT BENEFITS (OPEB)

In addition to the retirement benefits provided through MOSERS, the state of Missouri also funds, either partially or in its entirety, OPEB for eligible retirees as follow:

**Retiree Life Insurance**
Members, who retire on or after October 1, 1985 are eligible for $5,000 of state-sponsored, basic life insurance coverage if they retire directly from active employment. As of June 30, 2004, 13,291 retirees were eligible and participating in the program. The coverage is financed on a pay-as-you-go basis and is purchased as a group policy through competitive bids at a current cost of $10.35 per month per eligible participant ($1,606,341 for the year ended June 30, 2004). Premiums are paid entirely by the state as provided for by Section 104.515, RSMo.

Retirees of the Department of Labor and Industrial Relations (DOLIR), who retired prior to January 1, 1996, are eligible for state-sponsored life insurance coverage in the same amount of coverage they were receiving through the DOLIR. As of June 30, 2004, 534 retirees were eligible and participating in the program. The coverage is financed on a pay-as-you-go basis and is purchased as a group policy through competitive bids at a current cost of $2.07 per thousand dollars of coverage, per month, per eligible participant ($61,501 for the year ended June 30, 2004). Premiums are paid entirely by the DOLIR as provided for by Section 228.225, RSMo. Retirees of the DOLIR who retired on or after January 1, 1996, are eligible for $5,000 of state-sponsored life insurance coverage if they retire directly from active employment. They are included in the group described in the preceding paragraph.

## (5) PLAN TERMINATION

MOSERS and its related plans are administered in accordance with Missouri statutes. The statutes do not provide for termination of the plans under any circumstances.

## (6) CONTINGENCIES

Included in MOSERS' real estate investments is a property located in Kansas City, Missouri, which has been found to have hazardous substance contamination. MOSERS has participated in the Voluntary Cleanup Program and the Petroleum Storage Tank Insurance Fund administered by the Missouri Department of Natural Resources (DNR) in order to delineate the scope and magnitude of the contamination and determine what appropriate remedial action is needed. MOSERS has completed remedial action required by DNR, and DNR has issued a letter to MOSERS under each program indicating that MOSERS is no longer required to take any further remedial action with regard to the environmental issues identified on the property.

MOSERS is a defendant in one lawsuit that, in management's opinion, will not have a material effect on the financial statements.

Required Supplementary Information

# Schedules of Funding Progress

Pension Trust Funds - Last Six Years

### MSEP

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) Entry Age (b) | Unfunded AAL (UAAL) (b-a) | Funded Ratio (a/b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a)/c) |
|---|---|---|---|---|---|---|
| 6/30/99 | $4,908,820,033 | $5,505,968,629 | $597,148,596 | 89.2% | $1,564,552,532 | 38.2% |
| 6/30/00 | 5,511,714,616 | 5,920,684,192 | 408,969,576 | 93.1 | 1,683,697,080 | 24.3 |
| 6/30/01 | 5,881,232,850 | 6,065,166,716 | 183,933,866 | 97.0 | 1,758,190,268 | 10.5 |
| 6/30/02 | 6,033,133,598 | 6,294,272,275 | 261,138,677 | 95.9 | 1,773,283,484 | 14.7 |
| 6/30/03 | 6,057,329,072 | 6,662,291,406 | 604,962,334 | 90.9 | 1,739,895,364 | 34.8 |
| 6/30/04 | 6,118,214,495 | 7,230,010,928 | 1,111,796,433 | 84.6 | 1,737,454,454 | 64.0 |

### ALJLAP

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) Entry Age (b) | Unfunded AAL (UAAL) (b-a) | Funded Ratio (a/b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a)/c) |
|---|---|---|---|---|---|---|
| 6/30/99 | $11,763,737 | $14,774,525 | $3,010,788 | 79.6% | $3,488,698 | 86.3% |
| 6/30/00 | 13,191,825 | 16,521,743 | 3,329,918 | 79.8 | 4,072,888 | 81.8 |
| 6/30/01 | 14,410,199 | 16,809,962 | 2,399,763 | 85.7 | 4,661,020 | 51.5 |
| 6/30/02 | 15,172,619 | 18,175,342 | 3,002,723 | 83.5 | 4,779,504 | 62.8 |
| 6/30/03 | 15,626,461 | 19,946,487 | 4,320,026 | 78.3 | 4,657,896 | 92.7 |
| 6/30/04 | 16,238,804 | 20,384,213 | 4,145,409 | 79.7 | 4,655,340 | 89.0 |

### Judicial Plan

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) Entry Age (b) | Unfunded AAL (UAAL) (b-a) | Funded Ratio (a/b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll ((b-a)/c) |
|---|---|---|---|---|---|---|
| 6/30/99 | $6,067,305 | $227,802,341 | $221,735,036 | 2.7% | $34,162,013 | 649.1% |
| 6/30/00 | 13,861,769 | 241,797,341 | 227,935,572 | 5.7 | 37,107,487 | 614.3 |
| 6/30/01 | 22,613,050 | 247,978,904 | 225,365,854 | 9.1 | 38,687,793 | 582.5 |
| 6/30/02 | 29,651,113 | 256,115,452 | 226,464,339 | 11.6 | 40,068,744 | 565.2 |
| 6/30/03 | 34,566,516 | 267,049,857 | 232,483,341 | 12.9 | 40,052,952 | 580.4 |
| 6/30/04 | 39,120,142 | 280,397,464 | 241,277,322 | 14.0 | 39,878,499 | 605.0 |

See *Notes to the Schedules of Required Supplementary Information*.
See accompanying *Independent Auditors' Report*.

Required Supplementary Information

# Schedules of Employer Contributions

Pension Trust Funds - Last Six Years

### MSEP

| Year Ended June 30 | Annual Required Contribution Percent | Annual Required Contribution Dollar Amount | Percentage Contributed |
|---|---|---|---|
| 1999 | 12.58% | $197,909,834 | 100% |
| 2000 | 11.91 | 202,330,547 | 100 |
| 2001 | 11.59 | 215,750,128 | 100 |
| 2002 | 11.59 | 209,515,026 | 100 |
| 2003 | 8.81 | 156,576,150 | 100 |
| 2004 | 9.35 | 164,691,836 | 100 |

### ALJLAP

| Year Ended June 30 | Annual Required Contribution Percent | Annual Required Contribution Dollar Amount | Percentage Contributed |
|---|---|---|---|
| 1999 | 18.70% | $ 639,285 | 100% |
| 2000 | 20.10 | 807,022 | 100 |
| 2001 | 22.32 | 1,074,946 | 100 |
| 2002 | 22.32 | 1,072,562 | 100 |
| 2003 | 20.02 | 951,023 | 100 |
| 2004 | 20.12 | 945,950 | 100 |

### Judicial Plan

| Year Ended June 30 | Annual Required Contribution Percent | Annual Required Contribution Dollar Amount | Percentage Contributed |
|---|---|---|---|
| 1999 | 51.81% | $ 17,862,353 | 100% |
| 2000 | 53.92 | 19,988,676 | 100 |
| 2001 | 55.30 | 22,473,913 | 100 |
| 2002 | 55.30 | 22,088,485 | 100 |
| 2003 | 52.12 | 20,802,140 | 100 |
| 2004 | 51.68 | 20,636,314 | 100 |

See *Notes to the Schedules of Required Supplementary Information*.
See accompanying *Independent Auditors' Report*.

Required Supplementary Information

# Notes to the Schedules

June 30, 2004

**Actuarial Methods and Assumptions for Valuations Performed June 30, 2004**

The entry-age actuarial cost method of valuation is used in determining liabilities and normal cost. Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest), which are expressed as a percent of payroll. A closed 31-year amortization period was used for the June 30, 2004, valuations. The actuarial value of assets is based on a method that fully recognizes expected investment returns and averages unanticipated market return over a 5-year period. The investment return rate assumption used is 8.5% per year, compounded annually (net of investment expenses). The price inflation assumption used is 3.5% per year. Projected salary increase assumptions are based on 4% per year for wage inflation plus an additional 0% to 2.7% per year for the MSEP and 0% to 1.6% per year for the ALJLAP and the Judicial Plan (depending on age, attributable to seniority, and/or merit increases). The assumption used for annual post-retirement benefit increases is 4% (on a compound basis), for approximately the first 12 years, 3.1% for the 13th year and 2.8% per year thereafter or 2.8% per year, depending upon the date of hire and benefit election.

**Factors That Have Significantly Affected Trends**

1999 - The actuarial valuations as of June 30, 1999, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2001.

| **MSEP** | **Amount** | **Percent of Payroll** |
|---|---|---|
| Change in benefits | $6,258,206 | .40% |
| Experience and nonrecurring items | (11,264,771) | (.72) |
| **ALJLAP** | | |
| Change in benefits | 72,914 | 2.09 |
| Experience and nonrecurring items | 4,535 | .13 |
| **Judicial Plan** | | |
| Change in benefits | 321,123 | .94 |
| Experience and nonrecurring items | 150,313 | .44 |

2000 - The actuarial valuations as of June 30, 2000, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2002.

| **MSEP** | **Amount** | **Percent of Payroll** |
|---|---|---|
| Changes in assumptions | $(5,051,091) | (.30)% |
| Experience and nonrecurring items | (10,438,922) | (.62) |
| **ALJLAP** | | |
| Change in assumptions | 36,656 | .90 |
| Experience and nonrecurring items | (51,726) | (1.27) |
| **Judicial Plan** | | |
| Change in assumptions | (315,414) | (.85) |
| Experience and nonrecurring items | (352,521) | (.95) |

2001 - The actuarial valuations as of June 30, 2001, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2003.

| **MSEP** | **Amount** | **Percent of Payroll** |
|---|---|---|
| Change in assumptions | $(41,844,928) | (2.38)% |
| Release of asset funding margin | (15,647,893) | (.89) |
| Change in asset valuation method | (3,868,019) | (.22) |
| Plan experience | 12,483,151 | .71 |
| **ALJLAP** | | |
| Change in assumptions | (105,339) | (2.26) |
| Change in amortization of UAAL | (88,559) | (1.90) |
| Change in asset valuation method | (4,195) | (.09) |
| Plan experience | 49,873 | 1.07 |
| **Judicial** | | |
| Change in assumptions | (1,133,552) | (2.93) |
| Change in asset valuation method | (197,308) | (.51) |
| Plan experience | 441,041 | 1.14 |

2002 - The actuarial valuations as of June 30, 2002, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2004.

| **MSEP** | **Amount** | **Percent of Payroll** |
|---|---|---|
| Recognizing state pay freeze FY03 | $(6,206,492) | (.35)% |
| Plan experience | 15,782,223 | .89 |
| **ALJLAP** | | |
| Recognizing state pay freeze FY03 | (20,074) | (.42) |
| Plan experience | 23,420 | .49 |
| **Judicial Plan** | | |
| Recognizing state pay freeze FY03 | (208,357) | (.52) |
| Plan experience | 32,055 | .08 |

2003 - The actuarial valuations as of June 30, 2003, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2005.

| **MSEP** | **Amount** | **Percent of Payroll** |
|---|---|---|
| Reduction in projected across-the-board pay increases to 1.67% for the fiscal year ending June 30, 2005 | $(6,089,634) | (.35)% |
| Plan experience | 28,543,284 | 1.64 |
| **ALJLAP** | | |
| Recognizing state pay freeze for annual salaries above $40,000 | (18,632) | (.40) |
| Plan experience | 112,255 | 2.41 |
| **Judicial Plan** | | |
| Recognizing state pay freeze for annual salaries above $40,000 | (224,297) | (.56) |
| Plan experience | 1,357,795 | 3.39 |

2004 - The actuarial valuations as of June 30, 2004, reflected the following changes to the computed contribution rates for fiscal year ending June 30, 2006.

| **MSEP** | **Amount** | **Percent of Payroll** |
|---|---|---|
| Change in assumptions | $8,166,036 | .47% |
| Experience and nonrecurring items | 25,714,326 | 1.48 |
| **ALJLAP** | | |
| Change in assumptions | 466 | .01 |
| Experience and nonrecurring items | (16,294) | (.35) |
| **Judicial Plan** | | |
| Change in assumptions | (15,951) | (.04) |
| Experience and nonrecurring items | 514,433 | 1.29 |

# Schedule of Investment Expenses

## Pension Trust Funds - Year Ended June 30, 2004

| | MSEP | ALJLAP | Judicial Plan | Total |
|---|---|---|---|---|
| **Investing activity** | | | | |
| *Investment management fees* | | | | |
| Americap Advisors - domestic all-cap | $ 134,153 | $ 360 | $ 890 | $ 135,403 |
| BlackRock Financial Management L.P. - MBS/ABS | 1,423,643 | 3,819 | 9,450 | 1,436,912 |
| Blackstone - hedged equity | 3,819,484 | 10,247 | 25,353 | 3,855,084 |
| Blackstone - market neutral | 4,140,881 | 11,109 | 27,487 | 4,179,477 |
| Blackstone - real estate | 852,408 | 2,287 | 5,658 | 860,353 |
| Blackstone - relative value | 848,708 | 2,277 | 5,634 | 856,619 |
| Blakeney - emerging markets | 1,589,844 | 4,265 | 10,553 | 1,604,662 |
| Blum Capital Stinson - private equity | 127,041 | 341 | 843 | 128,225 |
| Brinson Partners, Inc. - private equity | 1,070 | 3 | 7 | 1,080 |
| Capital Guardian Trust - domestic all-cap | 456,244 | 1,224 | 3,028 | 460,496 |
| Catterton Partners - private equity | 766,885 | 2,058 | 5,090 | 774,033 |
| DDJ Capital Management - distressed debt | 1,155,891 | 3,101 | 7,673 | 1,166,665 |
| Dimensional Fund Advisors Inc. - domestic SMID-cap | 385,002 | 1,033 | 2,556 | 388,591 |
| GMO - emerging markets | 1,226,281 | 3,290 | 8,140 | 1,237,711 |
| Hoisington Investment Management Co. - U.S. treasuries | 174,925 | 469 | 1,161 | 176,555 |
| Legg Mason - domestic all-cap | 4,398,990 | 11,802 | 29,200 | 4,439,992 |
| Mastholm Investment Managers - int'l developed | 1,457,408 | 3,910 | 9,674 | 1,470,992 |
| Merrill Lynch - EAFE | 413,490 | 1,109 | 2,745 | 417,344 |
| Merrill Lynch - emerging markets | 156,220 | 419 | 1,037 | 157,676 |
| MHR Institutional Partners II - distressed debt | 3,214,578 | 8,624 | 21,338 | 3,244,540 |
| NISA Investment Advisors, LLC - commodities | 1,137,912 | 3,053 | 7,553 | 1,148,518 |
| NISA Investment Advisors, LLC - fixed income | 292,023 | 784 | 1,938 | 294,745 |
| Oak Associates, Ltd. - domestic all-cap | (3,606,377) | (9,675) | (23,938) | (3,639,990) |
| Oakbrook Investments - enhanced S&P 500 | 344,967 | 925 | 2,290 | 348,182 |
| Oaktree Capital Management - real estate | 608,382 | 1,632 | 4,038 | 614,052 |
| Oaktree Capital Management - emerging markets | 1,510,466 | 4,052 | 10,026 | 1,524,544 |
| Oaktree Capital Management - distressed debt | 17,673,435 | 47,415 | 117,313 | 17,838,163 |
| Relational Investors, LLC - private equity | 998,285 | 2,678 | 6,626 | 1,007,589 |
| Silchester International Investors - int'l developed | 1,838,421 | 4,932 | 12,203 | 1,855,556 |
| Wayzata Investment Partners - distressed debt | 4,166,334 | 11,178 | 27,655 | 4,205,167 |
| Total investment management fees | 51,706,994 | 138,721 | 343,221 | 52,188,936 |
| *Other investment fees* | | | | |
| *Investment consultant fees* | | | | |
| Summit Strategies, Inc. | 387,143 | 1,039 | 2,570 | 390,752 |
| Timberlink Consulting | 57,246 | 154 | 380 | 57,780 |
| *Investment custodial fees* | | | | |
| Mellon Bank | 862,864 | 2,315 | 5,728 | 870,907 |
| *Performance measurement fees* | | | | |
| Mellon Bank | 263,782 | 708 | 1,751 | 266,241 |
| *Portfolio rebalancing costs* | | | | |
| NISA Investment Advisors, LLC | 164,263 | 441 | 1,090 | 165,794 |
| Miscellaneous expense | 11,267 | 30 | 75 | 11,372 |
| *Internal investment activity expenses* | 1,382,029 | 3,708 | 9,174 | 1,394,911 |
| Total investing activity expenses | 54,835,588 | 147,116 | 363,989 | 55,346,693 |
| **Securities lending activity** | | | | |
| *Securities lending borrower rebates* | 12,374,726 | 33,200 | 82,141 | 12,490,067 |
| *Securities lending management fees* | | | | |
| Mellon Bank | 247,691 | 665 | 1,644 | 250,000 |
| Credit Suisse First Boston | 719,558 | 1,930 | 4,776 | 726,264 |
| Total securities lending activity expenses | 13,341,975 | 35,795 | 88,561 | 13,466,331 |
| Total investment expenses | $68,177,563 | $182,911 | $452,550 | $68,813,024 |

See accompanying *Independent Auditors' Report.*

# Schedule of Internal Investment Activity Expenses

## Pension Trust Funds - Year Ended June 30, 2004

| | MSEP | ALJLAP | Judicial Plan | Total |
|---|---|---|---|---|
| **Personnel services** | | | | |
| Salaries | $ 821,489 | $2,204 | $ 5,453 | $ 829,146 |
| Employee fringe benefits | 183,022 | 491 | 1,215 | 184,728 |
| Total personnel services | 1,004,511 | 2,695 | 6,668 | 1,013,874 |
| **Professional services** | | | | |
| Attorney services | 42,812 | 115 | 284 | 43,211 |
| Consulting services | 19,927 | 53 | 132 | 20,112 |
| Total professional services | 62,739 | 168 | 416 | 63,323 |
| **Communications** | | | | |
| Telephone | 1,312 | 4 | 9 | 1,325 |
| Total communications | 1,312 | 4 | 9 | 1,325 |
| **Equipment** | | | | |
| Maintenance | 39,754 | 107 | 264 | 40,125 |
| Total equipment | 39,754 | 107 | 264 | 40,125 |
| **Travel and meetings** | | | | |
| Staff travel and meetings | 60,429 | 162 | 401 | 60,992 |
| Total travel and meetings | 60,429 | 162 | 401 | 60,992 |
| **General** | | | | |
| Educational materials | 1,382 | 4 | 9 | 1,395 |
| Office supplies | 507 | 1 | 3 | 511 |
| Subscriptions and dues | 208,742 | 560 | 1,386 | 210,688 |
| Insurance | 1,623 | 4 | 11 | 1,638 |
| Miscellaneous | 1,030 | 3 | 7 | 1,040 |
| Total general | 213,284 | 572 | 1,416 | 215,272 |
| Total administrative expenses | $1,382,029 | $3,708 | $9,174 | $1,394,911 |

See accompanying *Independent Auditors' Report*.

# Schedule of Administrative Expenses

## Pension Trust Funds - Year Ended June 30, 2004

| | MSEP | ALJLAP | Judicial Plan | Total |
|---|---|---|---|---|
| **Personnel services** | | | | |
| Salaries | $ 2,670,912 | $ 7,166 | $17,729 | $2,695,807 |
| Employee fringe benefits | 800,416 | 2,147 | 5,313 | 807,876 |
| Total personnel services | 3,471,328 | 9,313 | 23,042 | 3,503,683 |
| **Professional services** | | | | |
| Actuarial services | 204,966 | 550 | 1,361 | 206,877 |
| Attorney services | 29,234 | 78 | 194 | 29,506 |
| Auditing services | 41,275 | 111 | 274 | 41,660 |
| Banking services | 17,482 | 47 | 116 | 17,645 |
| Consulting services | 76,549 | 205 | 508 | 77,262 |
| Total professional services | 369,506 | 991 | 2,453 | 372,950 |
| **Communications** | | | | |
| Postage and mailing | 349,164 | 937 | 2,318 | 352,419 |
| Telephone | 70,627 | 189 | 469 | 71,285 |
| Printing | 142,455 | 382 | 946 | 143,783 |
| Video production | 0 | 0 | 0 | 0 |
| Total communications | 562,246 | 1,508 | 3,733 | 567,487 |
| **Building and grounds** | | | | |
| Depreciation | 83,507 | 224 | 554 | 84,285 |
| Utilities | 55,989 | 150 | 372 | 56,511 |
| Maintenance | 46,063 | 124 | 306 | 46,493 |
| Total building and grounds | 185,559 | 498 | 1,232 | 187,289 |
| **Equipment** | | | | |
| Depreciation | 159,150 | 427 | 1,056 | 160,633 |
| Maintenance | 187,457 | 503 | 1,244 | 189,204 |
| Rental | 120,468 | 323 | 800 | 121,591 |
| Loss on sale of equipment | 24,009 | 64 | 159 | 24,232 |
| Total equipment | 491,084 | 1,317 | 3,259 | 495,660 |
| **Travel and meetings** | | | | |
| Board travel and meetings | 22,941 | 62 | 152 | 23,155 |
| Staff travel and meetings | 222,335 | 596 | 1,476 | 224,407 |
| Vehicle maintenance and operation | 5,512 | 15 | 36 | 5,563 |
| Total travel and meetings | 250,788 | 673 | 1,664 | 253,125 |
| **General** | | | | |
| Educational materials | 16,619 | 45 | 110 | 16,774 |
| Office supplies | 90,940 | 244 | 604 | 91,788 |
| Subscriptions and dues | 135,217 | 362 | 898 | 136,477 |
| Insurance | 112,880 | 303 | 749 | 113,932 |
| Advertising | 7,706 | 21 | 51 | 7,778 |
| Temporary help | 209 | 1 | 1 | 211 |
| Total general | 363,571 | 976 | 2,413 | 366,960 |
| Total administrative expenses | $5,694,082 | $15,276 | $37,796 | $5,747,154 |

See accompanying *Independent Auditors' Report*.

# Schedule of Administrative Expenses

## Internal Service Fund - Year Ended June 30, 2004

| | |
|---|---|
| **Personnel services** | |
| Salaries | $ 263,959 |
| Employee fringe benefits | 73,918 |
| Total personnel services | 337,877 |
| **Professional services** | |
| Attorney services | 14,444 |
| Auditing services | 765 |
| Banking services | 517 |
| Total professional services | 15,726 |
| **Communications** | |
| Postage and mailing | 1,338 |
| Telephone | 5,504 |
| Total communications | 6,842 |
| **Building and grounds** | |
| Building use charge | 8,429 |
| Utilities | 4,286 |
| Maintenance | 3,476 |
| Total building and grounds | 16,191 |
| **Equipment** | |
| Equipment use charge | 16,197 |
| Maintenance | 27,419 |
| Rental | 8,985 |
| Total equipment | 52,601 |
| **Travel and meetings** | |
| Board travel and meetings | 1,684 |
| Staff travel and meetings | 21,596 |
| Vehicle maintenance and operation | 460 |
| Total travel and meetings | 23,740 |
| **General** | |
| Educational materials | 1,257 |
| Office supplies | 7,190 |
| Subscriptions and dues | 3,999 |
| Insurance | 7,963 |
| Advertising | 553 |
| Temporary help | 29 |
| Miscellaneous | 72 |
| Total general | 21,063 |
| Total administrative expenses | $ 474,040 |

See accompanying *Independent Auditors' Report*.

# Schedule of Professional/Consultant Fees

Year Ended June 30, 2004

| | | Pension Trust Funds | | | | Internal Service Fund |
|---|---|---|---|---|---|---|
| Professional/Consultant | Nature of Service | MSEP | ALJLAP | Judicial Plan | Total | MO State Insurance Plan |
| Gabriel, Roeder, Smith & Co. | Actuarial | $204,966 | $550 | $1,361 | $206,877 | $ 0 |
| Thompson Coburn | Legal counsel | 29,234 | 78 | 194 | 29,506 | 14,444 |
| KPMG LLP | Financial audit | 41,275 | 110 | 275 | 41,660 | 765 |
| Jack Pierce | Governmental pension consulting | 29,723 | 80 | 197 | 30,000 | 0 |
| Central Bank | Banking | 17,481 | 47 | 116 | 17,644 | 517 |
| Buck Consultants | Actuarial audit | 975 | 3 | 6 | 984 | 0 |
| Qflow Systems LLC | Image system consulting | 372 | 1 | 2 | 375 | 0 |
| Charlesworth & Associates | Risk management consulting | 6,105 | 16 | 41 | 6,162 | 0 |
| Cortex Applied Research Inc. | Governance consulting | 18,032 | 48 | 120 | 18,200 | 0 |
| Interactive Solutions International LLC | Phone system upgrade | 10,362 | 28 | 69 | 10,459 | 0 |
| Investment Training and Consulting Institute | Internal auditing review | 8,801 | 24 | 58 | 8,883 | 0 |
| Tom Terez Workplace Solutions, Inc. | Building a meaningful workplace workshop | 2,180 | 6 | 14 | 2,200 | 0 |
| Total professional/consultant fees | | $369,506 | $991 | $2,453 | $372,950 | $15,726 |

See accompanying *Independent Auditors' Report*.
Information on investment management and consulting fees can be found in the *Schedule of Investment Expenses* on page 49.

# Investment Summary

## Pension Trust Funds - Year Ended June 30, 2004

| Type of Investment | June 30, 2003 Cost Value | June 30, 2003 Fair value | Purchases and Capital Additions at Cost | Sales and Redemptions at Cost | June 30, 2004 Cost Value | June 30, 2004 Fair Value | Percent of Total Fair Value |
|---|---|---|---|---|---|---|---|
| Fixed income | | | | | | | |
| Treasury bonds, notes, and bills | $ 929,864,639 | $1,032,342,022 | $ 909,807,649 | $ (789,267,472) | $1,050,404,816 | $1,050,091,805 | 19% |
| Gov. Bonds and gov't mortgage-backed securities | 135,794,273 | 141,092,001 | 1,945,425,516 | (1,914,315,977) | 166,903,812 | 168,354,710 | 3 |
| Corporate bonds | 283,832,823 | 295,536,548 | 441,927,961 | (320,492,950) | 405,267,834 | 408,300,411 | 7 |
| Convertible bonds | 1,289,398 | 1,375,050 | 4,896,914 | (6,186,311) | 1 | 15 | 0 |
| Collateralized mortgage obligations | 46,415,807 | 47,775,046 | 28,581,983 | (31,676,338) | 43,321,452 | 43,724,974 | 1 |
| International corporate bonds | 23,483,396 | 24,565,996 | 40,831,646 | (28,040,061) | 36,274,981 | 36,955,963 | 1 |
| Total fixed income | 1,420,680,336 | 1,542,686,663 | 3,371,471,669 | (3,089,979,109) | 1,702,172,896 | 1,707,427,878 | 31 |
| Common stock | 1,359,237,347 | 1,265,718,764 | 643,431,234 | (712,469,494) | 1,290,199,087 | 1,420,023,137 | 25 |
| Preferred stock | 13,829,178 | 15,899,659 | 16,960,341 | (16,541,143) | 14,248,376 | 16,159,907 | 0 |
| International investments | | | | | | | |
| International equities | 700,497,733 | 787,531,145 | 602,383,497 | (584,312,794) | 718,568,436 | 930,635,686 | 16 |
| Foreign currency | 30,699,813 | 30,943,450 | 253,459,672 | (276,494,215) | 7,665,270 | 7,539,591 | 0 |
| EAFE index fund | 288,791,743 | 198,123,067 | 48,500,000 | (157,635,662) | 179,656,081 | 171,078,831 | 3 |
| Total international investments | 1,019,989,289 | 1,016,597,662 | 904,343,169 | (1,018,442,671) | 905,889,787 | 1,109,254,108 | 19 |
| Real estate | | | | | | | |
| Equity holdings | 6,392,780 | 6,392,780 | 0 | 0 | 6,392,780 | 6,392,780 | 0 |
| REITs | 153,508,871 | 156,622,657 | 7,365,738 | (34,693,690) | 126,180,919 | 155,162,929 | 3 |
| Total real estate | 159,901,651 | 163,015,437 | 7,365,738 | (34,693,690) | 132,573,699 | 161,555,709 | 3 |
| Limited partnerships | 886,945,721 | 992,007,182 | 360,288,187 | (183,906,954) | 1,063,326,954 | 1,245,125,131 | 22 |
| Investments (per *Statement of Plan Net Assets* page 29) | 4,860,583,522 | 4,995,925,367 | 5,303,860,338 | (5,056,033,061) | 5,108,410,799 | 5,659,545,870 | 100% |
| Short-term investments | | | | | | | |
| Short-term investment funds | 252,556,014 | 252,556,014 | 2,348,601,418 | (2,316,958,072) | 284,199,360 | 284,199,360 | |
| Repurchase agreements | 415,676 | 415,676 | 123,954,128 | (123,900,961) | 468,843 | 468,843 | |
| Total short-term investments | 252,971,690 | 252,971,690 | 2,472,555,546 | (2,440,859,033) | 284,668,203 | 284,668,203 | |
| Invested securities lending collateral | | | | | | | |
| Corporate bonds | 626,651,979 | 626,871,678 | 944,675,653 | (665,381,514) | 905,946,118 | 906,355,294 | |
| Short-term investment funds | 630,684,156 | 630,684,156 | 69,027,763,645 | (69,375,969,232) | 282,478,569 | 282,478,569 | |
| Total invested securities lending collateral | 1,257,336,135 | 1,257,555,834 | 69,972,439,298 | (70,041,350,746) | 1,188,424,687 | 1,188,833,863 | |
| Total investments | $6,370,891,347 | $6,506,452,891 | $77,748,855,182 | $(77,538,242,840) | $6,581,503,689 | $7,133,047,936 | |

See accompanying *Independent Auditors' Report*.

Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review at the MOSERS' office.

# Investment Summary

## Internal Service Fund - Year Ended June 30, 2004

| | June 30, 2003 | | | | June 30, 2004 | | |
|---|---|---|---|---|---|---|---|
| **Type of Investment** | **Cost Value** | **Fair value** | **Purchases and Capital Additions at Cost** | **Sales and Redemptions at Cost** | **Cost Value** | **Fair Value** | **Percent of Total Fair Value** |
| Repurchase agreements | $1,749,617 | $1,749,617 | $499,097,692 | $(499,084,496) | $1,762,813 | $1,762,813 | 100% |

See accompanying *Independent Auditors' Report*.
Note: Due to space limitations and printing costs, a detailed listing of the investment holdings and transactions could not be provided in this annual report; however, the detailed reports are available for review at the MOSERS' office.

# Along the Missouri

Missouri was the launching pad for this great adventure, and the tempestuous lower portion of the Missouri River presented the first major test of leadership, character, and hardiness of the expedition. Travel up the Missouri was difficult and exhausting due to the extreme heat, bothersome insects, and turbulent river. For the first 600 miles of their journey, the expedition had to battle swift and dangerous currents. They used a keelboat and two smaller boats, called pirogues, to carry supplies and equipment on their journey, averaging only 15 miles a day.

# Along the Missouri


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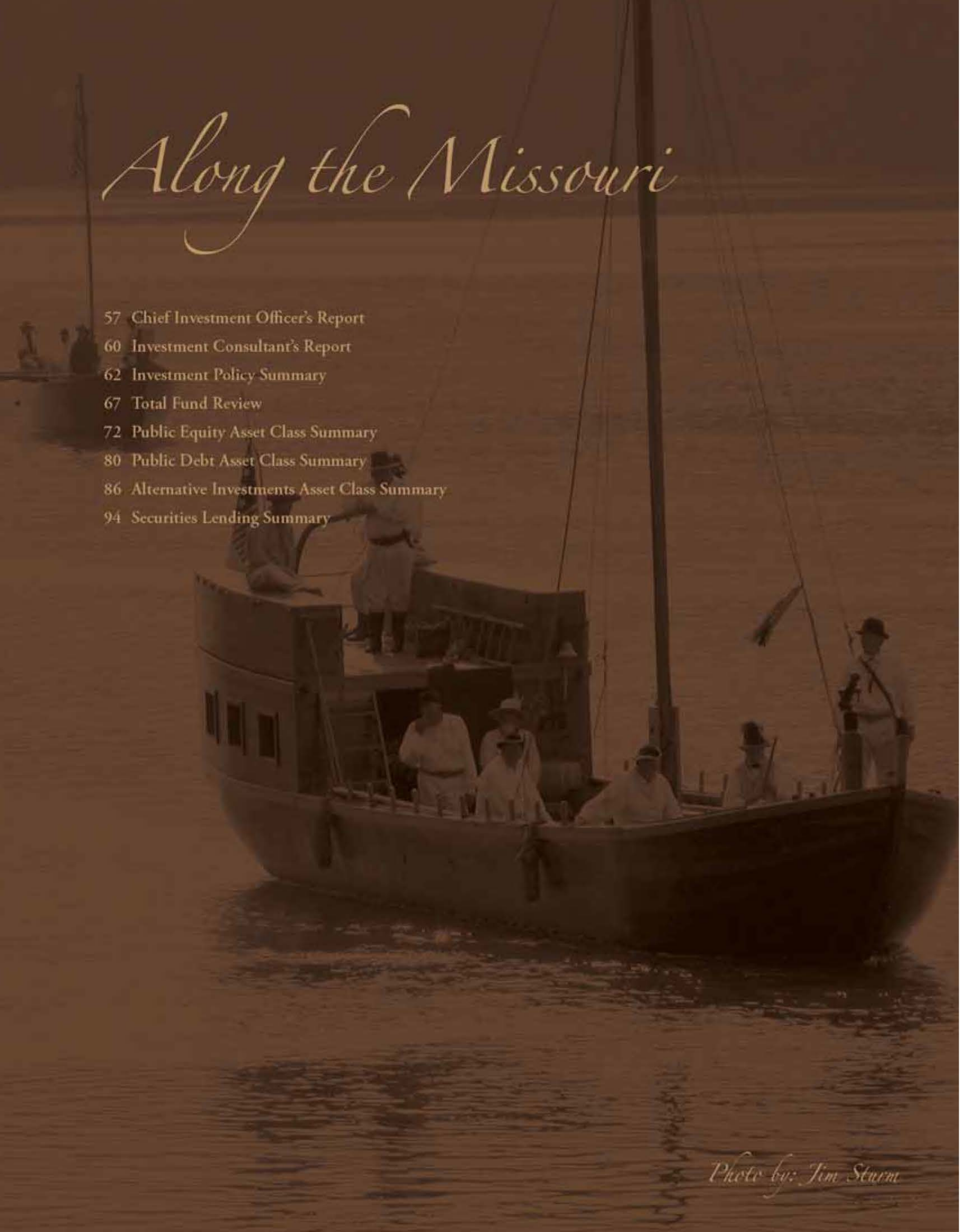


Photo by: Jim Sturm

# Chief Investment Officer's Report

October 1, 2004

Dear Members:

It is a privilege to present this year's Investment Section of the *MOSERS' Comprehensive Annual Financial Report*. As we pay tribute to Lewis and Clark and commemorate their epic journey, I pause for a moment to reflect upon MOSERS' investment journey and our experiences (both during the past year and beyond) from which we have grown. We may not face the same challenges as Lewis and Clark, but there are parallels which can be drawn between our respective journeys. I can attest to the fact that the "waters" we've been charting in this most recent decade have been like dangerous rapids compared to the relative calm that prevailed for the better part of the previous two decades. These changes in the market have led to many challenges and new discoveries over the past few years - many which have been of benefit to MOSERS' financial security. I am delighted to share the following journal entries related to the performance of your fund:

- As of June 30, 2004, MOSERS was one of the 200 largest defined benefit plans in the U.S. with total assets just under $6 billion.
- The fund returned 17.1% net of expenses for the fiscal year. This return compares favorably to the 16.7% return of our policy benchmark. In dollar terms, this excess performance translates into an additional $23 million in profit for the system.
- Over the three years ended June 30, 2004, MOSERS' portfolio returned 5.5% annualized. This return compares favorably to the 4.1% return of our policy benchmark. In dollar terms, this excess performance translates into well over $250 million for the fund that would not have been earned had the assets been invested passively.
- Over the 10-year time frame, MOSERS' performance of 10.2% on an annualized basis has well exceeded the required annual return of 6.8% necessary to fund the liabilities during this same period.
- When performance is compared to other public pension funds across the country, MOSERS' performance is consistently in the top 20% across all measured time periods. There are but a handful of other public pension funds that are in a position to claim such a similar consistency of results.

As I embark upon my 10th year as chief investment officer, I am reminded of the quote "Success is a journey, not a destination." Clearly my journey at the helm of the investment program has been memorable, and I have witnessed numerous changes within the investment arena which have impacted MOSERS' investment program. From the building of an internal team of investment professionals to the incorporation of new investment strategies into the portfolio, each change has made its mark on our program and moved us further along the journey we continue today. However, what continues to remain year after year here at MOSERS is our underlying mission – ***"To preserve the long-term corpus of the fund, to maximize total return within prudent risk parameters, and most importantly, to act in the exclusive interest of each of you, the members of the system."***

Looking back to Lewis' and Clark's historic journey, I can sympathize with what they might have felt when they were charged to find and map a transcontinental water route to the Pacific Ocean. When President Thomas Jefferson gave the Corps of Discovery their marching orders in 1804, little did they know what they might discover and whether their adventure would be deemed a success. With $2,500 in hand, they set out uncertain of what the next mile of their journey would bring. Investing is a lot like this historic journey – we are charting a course, but never know what the future will hold from the investment markets. Thus, we must prepare for a variety of outcomes in order to meet the system's financial needs. How do we accomplish this undertaking? Clearly, there are a few tools MOSERS utilizes that help to chart our course – most importantly, a well-defined governance policy along with a strong set of investment beliefs. I have spent these pages in past letters discussing those beliefs and their importance. While I will not go through them again now, they are detailed in the Investment Policy Summary found on page 62 if you would like to review them further.

MOSERS utilizes several measurement tools which help us to stay on course, particularly in rough water - a key tenet of a sound governance model. The prominent role of performance measurement in our investment process requires us to continually ask ourselves challenging questions, in particular, "How should we measure our investment performance to ensure that our governance model is working and our investment program is being implemented effectively on behalf of the system stakeholders?" On the surface, measuring investment success may seem like an easy undertaking, but in reality it can be quite complex. MOSERS has spent a great deal of time examining this question throughout the past year.

Keith Ambachtsheer, a well-known pension consultant, summed up the investment measurement issue best when he stated, "***What gets measured, gets managed.***" While there are numerous factors to consider in establishing measurement criteria, the primary consideration should be the realization that how performance is evaluated often drives the behavior of various parties engaged in the investment decision-making process. It is this element of the process that makes the selection of appropriate measurement tools critical to ensuring that decisions being made are aligned with the objectives of the system.

Recognizing the critical role of performance measurement, MOSERS' utilizes several tools in the oversight process. The primary tools for gauging MOSERS' investment success include i)comparing our longer-term results to the required rate of return objective (RRO) used in establishing the contribution rates; ii) comparing performance over all periods to a series of commonly used investment market benchmarks; and iii) comparing performance to a group of our peers. While some of these tools are more appropriate than others in particular situations, each plays a distinctive role in assessing MOSERS' investment success.

RRO is a natural choice given the ultimate goal is to fund the liabilities. Over the long-term, the returns must meet the RRO in order to maintain affordable contribution rates, barring dramatic changes to the plan's structure and/or demographic experience. In keeping with the board's primary objective to "preserve the long-term corpus of the fund," the comparison of fund returns to the RRO plays a key role in measuring the accomplishment of this objective. Comparison information on MOSERS' return relative to the RRO may be found on page 67.

Another common means of measuring performance is the use of standard market benchmarks. These benchmarks are paper portfolios of securities constructed for comparison with our actual results to determine if the real portfolios are being managed effectively. This tool is the most commonly used within the investment arena. As a result, thousands of benchmarks have emerged representing almost every conceivable asset class. While this demonstrates the importance that has been placed on quantifying investment results, it also makes identifying the appropriate benchmark for relative measurement a difficult undertaking. The use of market benchmarks is of critical importance on several levels within MOSERS' investment management process. Primarily, the board relies upon these benchmarks in their oversight capacity to ensure that I and the external asset consultant are effectively making good portfolio management decisions. The use of these benchmarks not only provides them with feedback about our

performance, but also serves as a prudent risk control mechanism which prevents us from taking actions that would run counter to system goals. That being said, the selection of the appropriate benchmark is critical to ensure that the benchmark we are modeling the portfolio around is reflective of the desired outcome. A comparison of MOSERS' returns to the board's defined market benchmarks may be found on page 68.

The final benchmarking tool MOSERS relies upon is to compare our performance to other similarly situated funds. We call a group of these funds a peer universe. This performance measurement tool is the least important in terms of funding our liabilities, however, it is difficult to completely ignore what and how others who operate in a similar environment are doing. The danger of focusing too much attention on this measurement tool is that it can lead to making investment decisions based on what others have done instead of thinking independently about investment opportunities. One of the very reasons we have been as successful as we've been in the last several years is because of our willingness to step outside the pack and chart a course very different from our peers. There is short-term risk associated with being different. However, it is our view that there is a greater long-term risk of not achieving our required return objectives if we are unwilling to think broadly in seeking out returns. MOSERS return comparison to our peers is found on page 68.

While benchmarks may seem like the perfect solution to every investment management issue, they are not without their problems. First, each person has their own individual perspective as to whether or not certain relative performance is good or bad. Second, there are multiple objectives the system must accomplish, making the utilization of one uniform measurement tool impossible. Finally, there is an interesting, but often difficult question to address, "What is the appropriate time frame over which performance should be measured?" We are programmed to look at annual performance numbers (as this report confirms). This time frame and even three and five year results are too short to derive meaningful information about the fund's long-term success in achieving its objectives. By focusing on the immediate, we run the risk of being short-sighted in our investment process and could compromise our long-term success by making rash decisions in order to beat a defined benchmark in the short-run. ***I believe strongly that the best way to earn high risk-adjusted returns is to be patient and just as importantly, to be contrarian - willing to stand alone.*** There will be times when this approach will cause our shorter-term performance to look bad relative to our peers. The success of our program during these times will be dependent upon our culture and our governance structure, both of which will help us to remain steadfast and not be overwhelmed by the urge to change course.

In closing, I would like to thank all of those who are involved in MOSERS' investment program in one way or another. Our board of trustees has consistently maintained the vision that has allowed us our flexibility, which in turn has generated much of our success. Our executive director possesses leadership qualities that have allowed us to feel comfortable leaving no stone unturned as we seek out investment opportunities. The internal team of investment professionals at MOSERS is second to none, and they deserve much of the credit for the performance record. Our investment consultant, Steve Holmes, and the team at Summit, continue to provide insights for many of the strategies we have successfully employed. The group of external service providers we have amassed is literally a "who's who" in the investment management world. This journey over the last ten years has been unbelievable, and I'm quite sure that the future will be met with its own set of challenges just as was the journey for Lewis and Clark. As we commemorate their historic travels, I am confident that MOSERS will strive to employ the same prudence and resolve as did they for the sake of current and future stakeholders.

Until next year,

Rick Dahl

Rick Dahl
Chief Investment Officer

# Investment Consultant's Report

Summit Strategies Group

October 1, 2004

The Board of Trustees
Missouri State Employees' Retirement System
907 Wildwood Drive
Jefferson City, MO 65109

Dear Board Members,

The fiscal year ending June 30, 2004, was an outstanding year for the investment assets of the Missouri State Employees' Retirement System. The bear market that had such a major impact on everyone's investment portfolios ended in March 2003 (exactly 3 years after it started), and the market surged forward through June 2004. As a result, the total fund was up 17.1% for the fiscal year. This equates to asset growth from investments of over $940 million. Even with this big year, the bear market that preceded it was dramatic enough that the three- and five-year results still trail the actuarial assumption, although the 10-year result is a very healthy 10.1%. The results in all periods exceed the market-based benchmarks we established for the fund, which means that even when the markets didn't behave as we had hoped, the portfolio consistently added value and made the fund stronger and healthier than it would have been otherwise.

In preparation for writing this letter, I went back and read my previous efforts. It seems hard to believe that this is my 13th such letter, but it is. Historically, I've written (sometimes at great length) about investment markets and philosophies and how I continue to marvel at the efficiency of the decision-making process that the board and staff regularly carry out at MOSERS (last year's letter), but this year I am trying something new and taking a totally different direction.

In keeping with this year's annual report theme of remembering Lewis and Clark, I reflect upon Stephen Ambrose's book on the Corps of Discovery, *Undaunted Courage*. What I have always enjoyed about Ambrose's writing style is that regardless of the historic event he is covering, he creates a bond for the reader with the historical characters by delving into their feelings and relationships beyond just names, places, and dates. The overwhelming personal theme of his work on Lewis and Clark is the tremendous relationship they had with each other. Although they were very different in personality

and skills, they complemented each other almost perfectly and therefore, were able to accomplish more than they had been instructed to, more than Jefferson could have hoped for, and all because of the strength of their very comfortable working relationship. My guess is that the rivers would have been charted and the wildlife chronicled regardless of the individuals involved, but the spirit of cooperation and mutual respect that these two explorers infused throughout their ranks directly enhanced the caliber of the effort and the final result.

My thoughts, as they shift from the Missouri River in 1804 to MOSERS in 2004, are that if I were chronicling my experience at MOSERS, I would be omitting a critical part of the story if I did not share my feelings with you. I have worked with many public pension plans over the years and hold many of them in high regard, but I must tell you that MOSERS' environment is truly unique in my experience. It is a genuine pleasure to be able to work for this organization. Somehow, a board full of politicians has remained totally apolitical. They respect each other and the staff they've assembled. The roles and responsibilities are clearly defined, and the board genuinely trusts its professionals and gives them healthy latitude to accomplish their goals. Additionally, they are all really nice people which, believe me, is a huge advantage.

If you ever walk into MOSERS' building, you'll quickly notice that everyone is smiling. The best way I can describe the atmosphere at MOSERS is this – they are all members of a winning team who are always pushing themselves to be better at what they do because everyone around them is pushing as well. While I'm the first to admit I don't understand the benefits side of the house, I have listened to many presentations by those folks and know they are constantly trying to be better at serving you. They talk to other plans for best practices and innovative ideas, monitor their turnaround time on inquiries, and are constantly looking for ways to get better information to the members in a shorter response time.

I do know something about the investment issues, and I can tell you that you have an extremely cohesive group of professionals looking out for your money. They believe (and the numbers back them up) they are better than most at what they do because they have been given the trust and latitude by the board to be more thoughtful, more nimble, and more focused. I hear other public fund staffers talk about the "stupid staff tricks" that their boards make them perform for political or personal reasons. Not here. MOSERS' investment team spends a higher percentage of its time on "pure" investment thinking, more than any other similar group I have seen.

So there are my thoughts. Light on technical investment jargon, but hopefully somewhat insightful for you, the reader. MOSERS in 2004 is a very special place because of the people who are there. While I'm sure a different group of folks would get the benefit checks out and the money invested, I think the focus on cooperation and continual improvement makes each of these areas that much better for you. It has certainly made my "journey" as consultant enjoyable, and I thought it was time this unique facet of MOSERS was recognized.

Sincerely,

Stephen P. Holmes, CFA
President

# Investment Policy Summary

The investment policy is specifically designed to serve as a reference point for the management of system assets and outlines MOSERS' investment philosophy and practices. This document assists the board of trustees in carrying out their fiduciary responsibilities for the investment of system assets. In addition, it serves as a guide for staff in implementing investment objectives defined by the board.

**Investment Objectives**
MOSERS' board has established guiding principles with respect to the investment of system assets, which include 1) preserving the long-term corpus of the fund; 2) maximizing total return within prudent risk parameters; and 3) acting in the exclusive interest of the members of the system. In keeping with these three primary guiding principles, the board has established the following broad investment objectives:

- Develop a real return objective (RRO)[1] that will:
  - Keep contribution rates reasonably level over long periods of time, absent changes in actuarial assumptions.
  - Maintain contribution rates consistent with historical levels ranging from 8% to 12% of covered payroll.
- Establish an asset allocation policy that is expected to meet the RRO over long periods of time, while minimizing volatility.
- Minimize the costs associated with implementation of the asset allocation through the efficient use of internal and external resources.

**Investment Beliefs**
MOSERS' internal investment staff and external asset consultant have established investment beliefs which serve as a guide in the implementation of the investment objectives adopted by the board. These beliefs help to form the basis of nearly every decision made within MOSERS' portfolio. From time to time, these beliefs may need slight modification to keep pace with the changing investment landscape; however, the fundamental concepts outlined in these beliefs should stand the test of time. The primary beliefs underlying MOSERS' investment program are as follows:

- **Diversification is critical because the future is unknown.** At the root of this belief is the knowledge that the future is unknowable. Accordingly, MOSERS' investment portfolio has been built upon the premise that very little is known about what the future holds, and as a result, the portfolio is structured to combat a variety of economic outcomes. The pie chart to the right reflects the various economic environments and the types of investments that should be expected to perform well in those environments. While staff may have views on the direction of the markets over the short-term, the adjustments to the portfolio will only be made at the margins to match those views. As a result, the portfolio will have significant diversification to provide risk reduction in a variety of markets.

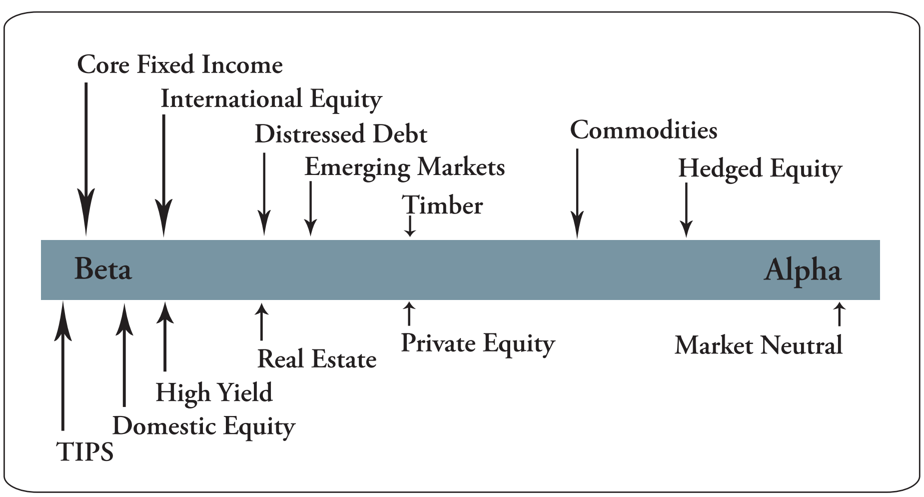
**Economic Diversification**


- **Every investment should be examined in the context of the two distinct return components – beta and alpha.** Beta is the return which is expected from simply having exposure to the market. It is the return that can be earned

1 The real return objective (RRO) is the rate by which the total return exceeds the inflation rate as measured by the CPI, U.S. City Average for all Urban Consumers (CPI-U). As of June 30, 2004, the real return objective was 5% after inflation.

by investing passively within a specific asset class. Exposures to beta can be purchased very cheaply, and over long periods of time, it is expected that returns from beta should be positive and coincide with the risk associated with a given asset class. Alpha, in contrast, is return generated through a manager's ability to select particular investments that perform better than the asset class as a whole. Alpha is a zero-sum game. For every winner, there is a loser on the other side. Historically, MOSERS' portfolio has been heavily weighted towards investments that provided mainly beta returns. In 2002, after the most recent asset/liability study, a greater emphasis was placed upon generating alpha returns within the portfolio, as it is expected that returns strictly from beta will not generate the returns necessary to fund the liabilities of the system. As illustrated in the chart below, several alpha-generating strategies are in place within the portfolio today.

**Continuum of Beta and Alpha**




- **Asset classes will be in and out of favor at different times and they all tend to be cyclical, thus flexibility is key.** This belief acknowledges that economies are cyclical, and thus it is only logical that certain investments will fair better than others depending upon the current economic environment. In order to make a "good" investment, the price one pays for an investment must be considered. In order to capitalize on potential opportunities that may arise due to asset classes being "cheap" or "expensive" relative to their historical norms, the board has granted the chief investment officer (CIO) the ability to make strategic sub-asset allocation decisions at the margins subject to predefined ranges.
- **This isn't about risk or return. It's about risk-adjusted returns with a long-term focus on the liabilities.** While it is easy to focus all attention on the returns a portfolio is able to generate, the risks relative to the liabilities of the system must be taken into consideration. Despite MOSERS' infinite time horizon, it must not be overlooked that there are benefits to be paid in the short run. In addition, the "cost of volatility" within the portfolio must not be underestimated as volatility has a dramatic impact on the contribution rate and thus the state's ability to fund the plan going forward.

**Roles and Responsibilities**

***Board of Trustees***

The board of trustees bears the ultimate fiduciary responsibility for the investment of system assets. Members of the board must adhere to state law and prudent standards of diligence with respect to their duties as investment fiduciaries. Accordingly, they are required to discharge their duties in the exclusive interests of the plan participants. They must also "act with the same care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with those matters would use in the conduct of a similar enterprise with similar aims.[2]" Specifically related to investments, the board is charged with the duties of establishing and maintaining broad policies and objectives for the investment program considering the recommendations of staff and the external asset consultant.

***Executive Director***

The executive director is appointed by and serves at the pleasure of the board. The board has given the executive director broad authority for planning, organizing, and administering the operations and investments of the system under broad policy guidance from the board. Specifically with regard to investments, the executive director is broadly responsible for the oversight of the investment program.

2 Section 105.688, RSMo - Investment Fiduciaries, Duties

The executive director must ensure the system assets are invested in accordance with the board's policies and that internal controls are in place to safeguard system assets. The executive director must also certify that all manager hiring and firing decisions and strategic allocation decisions are made in accordance with the board's governance policy.

***CIO and Internal Staff***

The CIO serves at the pleasure of the executive director, yet has a direct line of communication with the board on investment-related issues. The CIO has primary responsibility for the overall direction of the investment program. The CIO works with the external asset consultant and executive director in advising the board on policies related to the investment program. The CIO has primary responsibility for hiring and firing decisions related to investment service providers, but must have the approval of the external asset consultant in so doing. In addition, the executive director must certify that the decision was made in accordance with the board governance policy. The CIO is also charged with the responsibility of making strategic allocation decisions with the approval of the external asset consultant and certification of the executive director. Other responsibilities of the CIO include monitoring the investment of system assets, oversight of external money managers and the internally managed portfolios, and keeping the board apprised of situations which merit their attention. The internal investment staff is accountable to the CIO.

***External Asset Consultant***

Summit Strategies Group of St. Louis, Missouri serves as the external asset consultant. The external asset consultant serves at the pleasure of the board. The primary duties of the external asset consultant are to advise the board on policies related to the investment program and to provide a third party perspective and level of oversight to the investment program. The external asset consultant must also approve all manager hiring and firing decisions and strategic allocation decisions made by the CIO. The external asset consultant also provides advice and input to the CIO and internal investment staff on investment-related issues and money manager searches.

***Internal Auditor***

The internal auditor reports directly to the executive director and, if in the opinion of the internal auditor circumstances warrant, may report directly to the board. The internal auditor is independent of the system's investment operations and among other things, is responsible for providing objective audit and review services for the investment operations. It is the internal auditor's objective to promote adequate and effective internal controls at a reasonable cost, which results in suggested improvements that will lead to economies and efficiencies in the investment operations.

***Master Custodian***

Mellon Financial Corp. of Boston, Massachusetts serves as the master custodian of system assets, except in cases where investments are held in partnerships, commingled accounts, or unique asset classes, where it is impossible for them to do so. The master custodian is responsible for maintaining the official book of record, providing performance reports, and serving as an additional layer of risk control in the safekeeping of system assets.

**Asset Allocation**

The system's asset allocation is regarded as one of the most important decisions in the investment management process. The current asset allocation is designed to achieve the long-term required return objectives of the system, given certain risk constraints. The current asset allocation reflects the need for a diversified portfolio which will perform well in a variety of economic conditions and will help reduce the portfolio's overall volatility. In determining the optimum mix of assets, the board considers five factors:

- The expected rate of return for each asset class.
- The expected risk of each asset class.
- The correlation between the rates of return of the asset classes.
- The investment objectives and risk constraints of the fund.
- The impact of portfolio volatility on the contribution rate.

The policy allocation as of June 30, 2004, is illustrated in the table at the top of page 65.

While the board maintains a set policy allocation mix, they have taken steps to provide flexibility at the sub-asset class level by granting authority to the CIO, with the approval of the external asset consultant and certification of the executive director, to make sub-asset class allocation decisions based upon expectations for each sub-asset class. This flexibility has allowed the system to take advantage of changing market conditions. The board has placed

## Policy Allocation

| Asset Class | Target Allocation | Strategic Allocation Ranges |
|---|---|---|
| Public equity | 50.0% | |
| Domestic equity | 27.5 | 15.0 to 40.0% |
| Hedged equity | 5.0 | 0.0 to 10.0 |
| Int'l developed equity | 15.0 | 5.0 to 25.0 |
| Emerging market equity | 2.5 | 0.0 to 5.0 |
| Public debt | 30.0 | |
| Core fixed income | 10.0 | 5.0 to 15.0 |
| TIPS | 10.0 | 5.0 to 15.0 |
| High yield bonds | 5.0 | 0.0 to 10.0 |
| Market neutral | 5.0 | 0.0 to 10.0 |
| Alternatives | 20.0 | |
| Distressed debt | 2.5 | 0.0 to 5.0 |
| Commodities | 2.5 | 0.0 to 5.0 |
| Timber | 5.0 | 2.5 to 7.5 |
| Private equity | 5.0 | 2.5 to 7.5 |
| REITs/Real estate | 5.0 | 2.5 to 7.5 |

ranges on the sub-asset class allocations in order to maintain appropriate risk controls. These ranges are included in the table above.

**Rebalancing**

It is the responsibility of staff to ensure that the asset allocation is maintained by adhering to the rebalancing policy. Staff has engaged NISA Investment Advisors, LLC of St. Louis, Missouri, to assist in the oversight and implementation of the rebalancing policy. MOSERS utilizes a combination of cash market and exchange-traded futures transactions to maintain the total fund allocation at the broad policy level. Month-end reviews are conducted to bring the portfolio back within allowable ranges of the broad policy targets.

**Risk Controls**

MOSERS' investment program faces numerous risks; however, the primary risk to MOSERS is that the assets will not support the liabilities over long periods of time. In order to control for this risk and numerous other risks that face the system, the board has taken the following steps to help protect the system on an ongoing basis:

- Actuarial valuations are performed each year to ensure the system is on track to meet the funding objectives of the plan. In addition, every five years an external audit of the actuary is conducted to ensure that the assumptions being made and calculation methods being utilized are resulting in properly computed liabilities.
- Asset/liability studies are conducted at least once every five years. The purpose of this study is to ensure that the current portfolio design is structured to meet the liabilities. This is also a time when investment expectations are reexamined in a more detailed way.
- A governance policy which incorporates investment limitations is in place to ensure that board policies are clearly identified. Within these documents, the desired outcomes are outlined, individuals are identified as to their responsibilities, and details are lined out as to how the outcomes will be measured by the board. Reporting requirements are clearly identified to ensure appropriate checks and balances are in place. In addition, annual performance audits are conducted to ensure the measurement tools and methodology being utilized to gauge performance are suitable.

**Performance Objectives and Monitoring Process**

***Total Fund***

Generating returns net of expenses in excess of the RRO of 5% after inflation remains the primary performance objective for the total fund over the long-term. The reason for the long-term focus on this objective is to preclude the temptation to overreact to events in the marketplace that have no relevance in the management of the relationship between the assets and liabilities. The resulting dilemma is the conflicting need to evaluate investment policy implementation decisions over shorter time frames while maintaining the longer-term focus necessary to manage and measure performance relative to the RRO. To address this problem, the board evaluates performance relative to policy and strategy benchmarks which help to evaluate the board's broad policy decisions and staff's implementation decisions. Policy benchmarks measure broad investment opportunities of each asset class in which MOSERS has chosen to invest. The strategy benchmarks represent decisions made by the CIO to strategically deviate from the policy asset allocation for each sub-asset class (mid-point of the strategic allocation range). The return of the strategy benchmarks are determined based

upon the actual weight of the asset class multiplied by the appropriate benchmark.

The policy and strategy benchmarks are used in the following manner to evaluate decisions made by the board and staff:

- **Board Decisions:** The value added through board policy decisions is measured by the difference between the total fund policy benchmark return and the RRO. This difference captures the value added by the board through policy asset allocation decisions relative to the return necessary to fund the liabilities. A policy benchmark return greater than the RRO reflects value added through board decisions. A policy benchmark return less than the RRO reflects losses or shortfalls in performance in funding the liabilities. These policy decisions are measured over long periods of time.
- **CIO and External Asset Consultant Decisions:** There are two components to decisions made by the CIO and external asset consultant which are monitored by the board on an ongoing basis. These include 1) strategic sub-asset class allocation decisions and 2) implementation decisions.

  Strategy Decisions are sub-asset class allocation choices made by the CIO with the approval of the external asset consultant and certification of the executive director to deviate from the policy benchmark weight. The value added through these decisions to overweight or underweight these sub-asset classes is measured by the difference between the strategy benchmark return and the policy benchmark return. This difference captures the value added by the CIO through sub-asset class strategic decisions relative to the board's broad policy allocation decisions. A strategy benchmark return greater than the policy benchmark return reflects value added through the sub-asset class allocation decisions. A strategy benchmark return less than the policy benchmark return reflects losses to fund performance based upon strategy decisions. Strategy decisions should be measured over all periods of time, with majority weight placed on outcomes that have occurred over a market cycle.

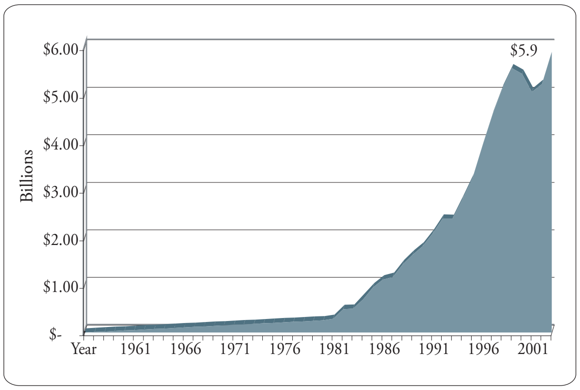
  Implementation Decisions are money manager selection choices made by the CIO with the approval of the external asset consultant and the certification of the executive director that the decision was made in accordance with the board's adopted governance policy. The value added through these decisions is measured by the difference between the actual portfolio return and the strategy benchmark return. This difference captures the value added through these manager selection decisions. An actual portfolio return greater than the strategy benchmark return reflects value added through these manager selection decisions. An actual portfolio return less than the strategy benchmark return reflects losses to fund performance based upon implementation decisions. Implementation decisions should be measured over all periods of time, with a majority weight placed on outcomes that have occurred over a market cycle.

  The board receives performance information on a quarterly basis to help ensure adequate monitoring of the fund's overall performance objectives.

***Asset Classes***

At the broad asset class level, policy and strategy benchmarks have been established to measure board and CIO/external asset consultant decisions. At the manager level, performance is measured against appropriate benchmarks for each particular investment mandate. Investment guidelines have been established for each manager outlining specific expectations for each portfolio. In addition, many managers are employed with performance-based fee structures which help to align the manager's interest with the total fund objectives.

# Total Fund Review




## Sub-Asset Class Returns for Fiscal Year Ended June 2004

| Sub-Asset Class | Fiscal Year Return | Contribution to Total Return |
|---|---|---|
| Domestic equity | 26.5% | 6.7% |
| Developed int'l equity | 31.3 | 5.3 |
| Emerging markets | 32.5 | 1.2 |
| Hedged equity | 10.1 | 0.5 |
| **Total public equity** | **26.9** | **13.7** |
| Core bonds | (0.2) | (0.0) |
| High yield | 10.3 | 0.5 |
| TIPS | 6.4 | 0.6 |
| Market neutral | 4.4 | 0.3 |
| **Total public debt** | **4.6** | **1.4** |
| Real estate | 18.0 | 0.8 |
| Commodities | 29.2 | 0.8 |
| Distressed debt | 6.5 | 0.1 |
| Timber | (5.7) | (0.2) |
| Private equity | 13.4 | 0.4 |
| Illiquid assets | 1.7 | 0.0 |
| **Total alternatives** | **11.4** | **1.9** |
| **Cash[3]** | **25.2** | **0.1** |
| **Total fund** | **17.1** | **17.1** |

3 The return for cash includes income from securities lending, securities litigation, and other miscellaneous sources.

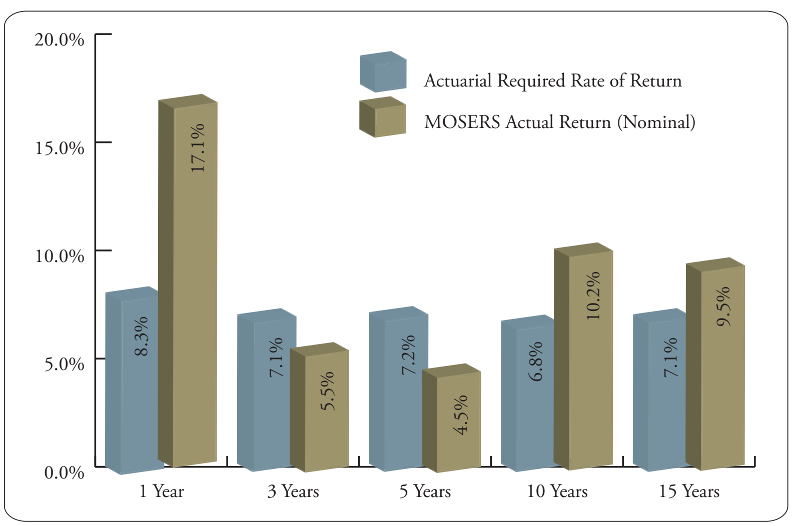
4 CPI Source: United State Department of Labor, Bureau of Labor Statistics (not seasonally adjusted). MOSERS' real return is the excess return over the CPI utilizing the formula: Real = (1+Nominal)/(1+CPI)-1.

**Market Value**
As of June 30, 2004, MOSERS' investment portfolio had a market value of $5.9 billion. The chart to the left illustrates the growth of MOSERS' portfolio since the system's inception.

**Investment Performance**
MOSERS' investment portfolio returned 17.1% in FY04. Performance returns were calculated using a time-weighted rate of return based on market values. Performance for the fiscal year may be attributed to the various sub-asset classes. The table to the left illustrates each sub-asset classes' contribution to the total return.

**Investment Performance vs. the Required Return Objective**
The first measure of comparison for the portfolio's investment performance is to determine how well the fund performed relative to the RRO. The RRO is the rate established by the board that MOSERS' investment portfolio must earn in order to meet future plan obligations after accounting for inflation. The actuarial funding objective is to produce a return that exceeds the rate of inflation by 5% per year. The best known measure of inflation is the Consumer Price Index (CPI).[4] For purposes of examining fund performance relative to the RRO, MOSERS is interested in long periods of time. Given the volatile nature of the investment markets, MOSERS should not expect the portfolio to always meet the RRO in the short-term. From the bar chart below, one can see that MOSERS' investment returns have exceeded the RRO over long periods of time.

## Total Fund Actual Return vs. Real Return Objective



**Investment Performance vs. Benchmark Comparisons**

The board compares fund returns to the following two benchmarks: the policy benchmark and the strategy benchmark.

Policy Benchmark – The policy benchmark provides an indication of the returns that could be achieved (excluding transaction costs) by a portfolio invested passively in the broad market with percentage weights allocated to each asset class in MOSERS' policy asset allocation.

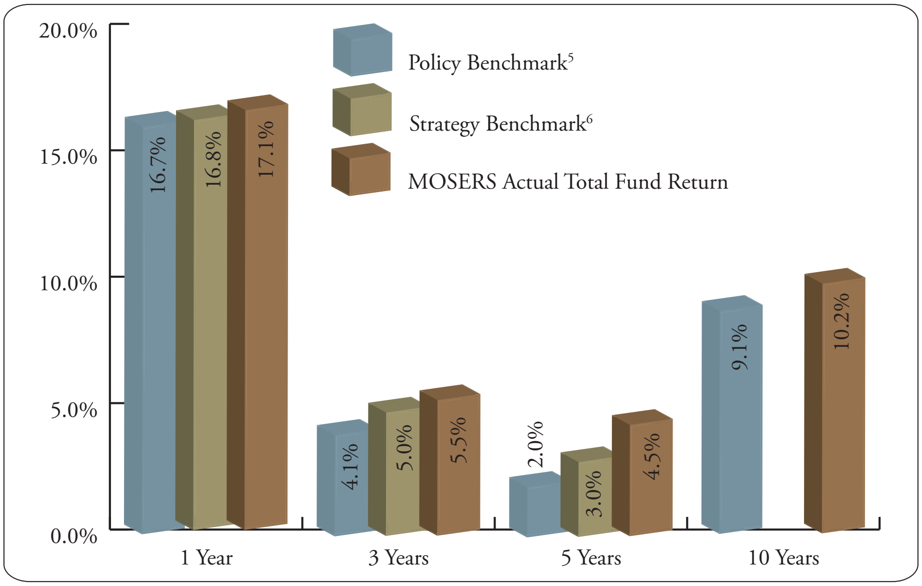
Strategy Benchmark – The strategy benchmark is more narrowly defined and focuses on the sub-asset class allocation decisions made by the chief investment officer. Prior to 1995, strategy benchmarks were not clearly defined.

Historical returns are displayed in the bar chart at top right.

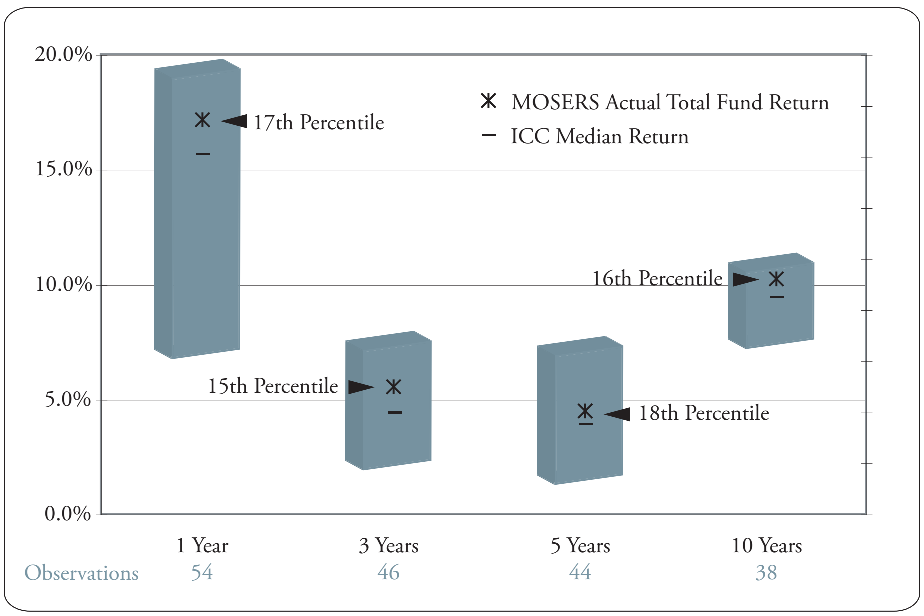
By comparing the policy benchmark to the strategy benchmark, the board is able to determine what value is being added through strategic decisions made by the CIO to position the fund away from the policy allocation. Value is being created if the strategy benchmark returns exceed the policy benchmark returns.

Similarly, by comparing the actual return to the strategy benchmark, the board will, over time be able to judge the success or failure of the staff and the consultant in implementing strategic decisions. The primary implementation decision is in determining which managers the fund should employ. Value is being added from manager selection if the total fund return exceeds the strategy benchmark return.

**Total Fund Return vs. Benchmarks**




**Total Fund Return vs. ICC Universe**




**Investment Performance vs. Peer Universe**

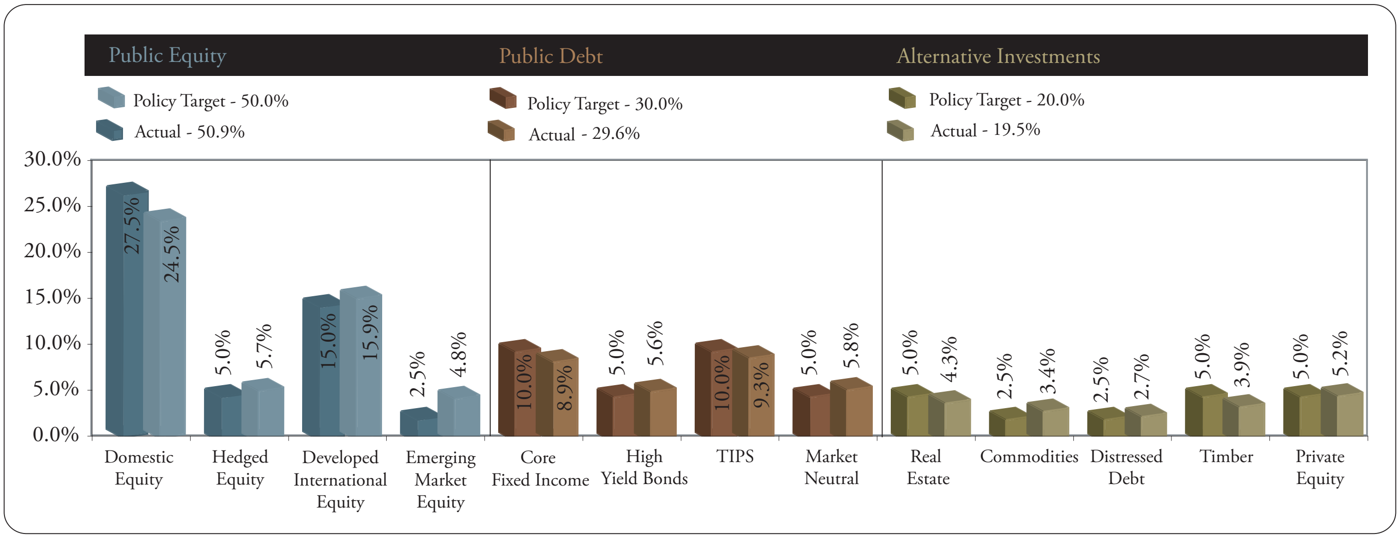
To a lesser extent, the board compares total fund performance to the returns generated by a peer group of public pension funds generated by the Independent Consultants Cooperative (ICC)[7] universe. For FY04, MOSERS' total return of 17.1% ranked in the top 20% (17th percentile) of the ICC universe. Historical data about MOSERS' total fund performance relative to this universe is provided in the second chart above.

5 As of 6/30/04, the policy benchmark was comprised of the following components: 50% total public equity policy benchmark, 30% total public debt policy benchmark, 20% total alternative investments policy benchmark.

6 As of 6/30/04, the strategy benchmark was comprised of the following components: 50% total public equity strategy benchmark, 30% total public debt strategy benchmark, 20% total alternative investments strategy benchmark.

7 The ICC is a cooperative of 17 independent investment consultants from across the U.S. and one major custodial bank that collectively provides performance data to create the universe of funds with assets in excess of $1 billion. Note that performance within this universe is captured gross of fees.

**Total Fund Policy vs. Actual Allocation (As a Percentage of the Total Fund)**




**Asset Allocation Overview**
As of June 30, 2004, the board's broad policy allocation mix was 50% public equity, 30% public debt, and 20% alternative investments. The chart above illustrates the policy target as of June 30, 2004, for each sub-asset class, along with the actual strategic allocation to each type of investment.

In the spring of 2002, staff in conjunction with the external asset consultant, conducted an asset/liability study to reexamine the policy asset allocation of the fund. The intent was to examine the portfolio's ability to generate the required rate of return given return expectations for the various asset classes represented in the portfolio, and to lower the total portfolio volatility. The formal study revealed that MOSERS' portfolio could be further diversified in order to protect it from a variety of economic scenarios that might play out over time, thus reducing the portfolio volatility and ultimately contribution rates.

In addition, the board granted flexibility to the CIO to make strategic decisions related to the allocation subject to predefined ranges. A strategic decision should be thought of as any decision that might cause MOSERS' actual portfolio to differ from the policy asset allocation. This has allowed MOSERS to capitalize on investment opportunities at the margin by overweighting asset classes that are viewed as "cheap" relative to their historical norm and underweighting asset classes that are "expensive" relative to their historical norm. Since being granted this authority in 2002, the ability to make strategic asset allocation decisions along with manager hiring decisions has added 0.8% of return annually, or approximately $45 million of additional annual profit to the portfolio.

# Schedule of Investment Portfolios by Asset Class

As of June 30, 2004

| | Fair Value |
|---|---|
| **Public equity** | |
| Domestic equity | $ 1,443,699,237 |
| International developed equity | 935,763,637 |
| Emerging market equity | 282,966,595 |
| Hedged equity | 336,449,126 |
| Total public equity | 2,998,878,595 |
| **Public debt** | |
| Core fixed income | 521,862,133 |
| High yield bonds | 331,326,126 |
| TIPS | 547,863,361 |
| Market neutral | 343,484,497 |
| Total public debt | 1,744,536,117 |
| **Alternative investments** | |
| Real estate | 254,099,947 |
| Commodities | 201,566,972 |
| Distressed debt | 154,934,518 |
| Private equity | 303,281,784 |
| Timber | 232,000,023 |
| Total alternative investment | 1,145,883,244 |
| **Other portfolios** | |
| Other investments | 6,576,358 |
| Cash reserve | 15,034,139 |
| Total other | 21,610,497 |
| Grand total | $ 5,910,908,453 |

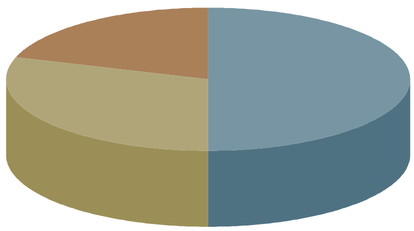
| | |
|---|---|
| **Reconciliation to *Statements of Plan Net Assets*** | |
| Total portfolio value | $ 5,910,908,453 |
| STIF | (284,199,360) |
| Uninvested cash | (19,825) |
| Cash held at Lehman Brothers | (246,000) |
| Accrued income | (26,549,988) |
| Accounts receivable securities sold | (140,404,814) |
| Accounts payable securities purchased | 179,856,429 |
| Incentive fees payable | 19,776,836 |
| Accrued security lending income | 424,139 |
| Investments per *Statements of Plan Assets* | $ 5,659,545,870 |

# Investment Manager Fees

As of June 30, 2004

| | Management Fees Paid | Incentive Fees Paid | Total Fees Paid | Incentive Fees Accrued |
|---|---|---|---|---|
| **Public equity managers** | | | | |
| Americap Advisors - domestic all-cap | $ 135,403 | $ 0 | $ 135,403 | $ 0 |
| Capital Guardian Trust - domestic all-cap | 460,496 | 0 | 460,496 | 0 |
| Legg Mason - domestic all-cap | 0 | 843,897 | 843,897 | 3,596,095 |
| Oak Associates - domestic all-cap | 0 | (3,639,990) | (3,639,990) | 0 |
| DFA - domestic SMID-cap | 388,591 | 0 | 388,591 | 0 |
| Oakbrook Investments - enhanced S&P 500 | 348,182 | 0 | 348,182 | 0 |
| Mastholm - int'l developed | 1,470,992 | 0 | 1,470,992 | 0 |
| Merrill Lynch - enhanced EAFE | 417,344 | 0 | 417,344 | 0 |
| Silchester - int'l developed | 1,855,556 | 0 | 1,855,556 | 0 |
| Blakeney - emerging markets | 584,424 | 1,020,238 | 1,604,662 | 0 |
| GMO - emerging markets | 1,237,711 | 0 | 1,237,711 | 0 |
| Merrill Lynch - enhanced EMF | 157,676 | 0 | 157,676 | 0 |
| Oaktree Capital Management - emerging markets | 659,973 | 0 | 659,973 | 864,571 |
| Blackstone - hedged equity | 3,855,084 | 0 | 3,855,084 | 0 |
| Total public equity managers | 11,571,432 | (1,775,855) | 9,795,577 | 4,460,666 |
| **Public debt managers** | | | | |
| Blackrock - MBS/ABS | 225,087 | 0 | 225,087 | 0 |
| NISA - fixed income | 294,745 | 0 | 294,745 | 0 |
| Blackrock - high yield | 1,211,825 | 0 | 1,211,825 | 0 |
| Blackstone - market neutral | 3,595,645 | 583,832 | 4,179,477 | 0 |
| Total public debt managers | 5,327,302 | 583,832 | 5,911,134 | 0 |
| **Alternative investment managers** | | | | |
| Blackstone - relative value | 583,879 | 272,740 | 856,619 | 0 |
| Blackstone - real estate | 806,824 | 53,529 | 860,353 | 0 |
| Oaktree Capital Management - real estate | 614,052 | 0 | 614,052 | 0 |
| TCW - mezzanine debt | 0 | 0 | 0 | 0 |
| NISA - commodities | 291,528 | 856,990 | 1,148,518 | 0 |
| DDJ Capital Management - distressed debt | 750,000 | 0 | 750,000 | 416,665 |
| MHR Fund Management - distressed debt | 855,274 | 0 | 855,274 | 2,389,266 |
| Oaktree Capital Management - distress debt | 1,467,628 | 7,315,463 | 8,783,091 | 9,055,072 |
| Wayzata Investment Partners - distressed debt | 750,000 | 0 | 750,000 | 3,455,167 |
| Blum Capital - private equity | 128,225 | 0 | 128,225 | 0 |
| Catterton Partners - private equity | 774,033 | 0 | 774,033 | 0 |
| Relational Investors - private equity | 520,883 | 486,706 | 1,007,589 | 0 |
| Hoisington - treasuries (deflation hedge) | 176,555 | 0 | 176,555 | 0 |
| Total alternative investment managers | 7,718,881 | 8,985,428 | 16,704,309 | 15,316,170 |
| **Other managers** | | | | |
| NISA - rebalancing | 165,794 | 0 | 165,794 | 0 |
| Brinson - private equity | 1,080 | 0 | 1,080 | 0 |
| Total other managers | 166,874 | 0 | 166,874 | 0 |
| **Grand totals** | $ 24,784,489 | $ 7,793,405 | $ 32,577,894 | $ 19,776,836 |

# Public Equity Asset Class Summary




**Highlights**
As of June 30, 2004, MOSERS' public equity portfolio had a market value of $3 billion, representing 50.9% of the total fund. Performance for the fiscal year was 26.9% net of fees and expenses.

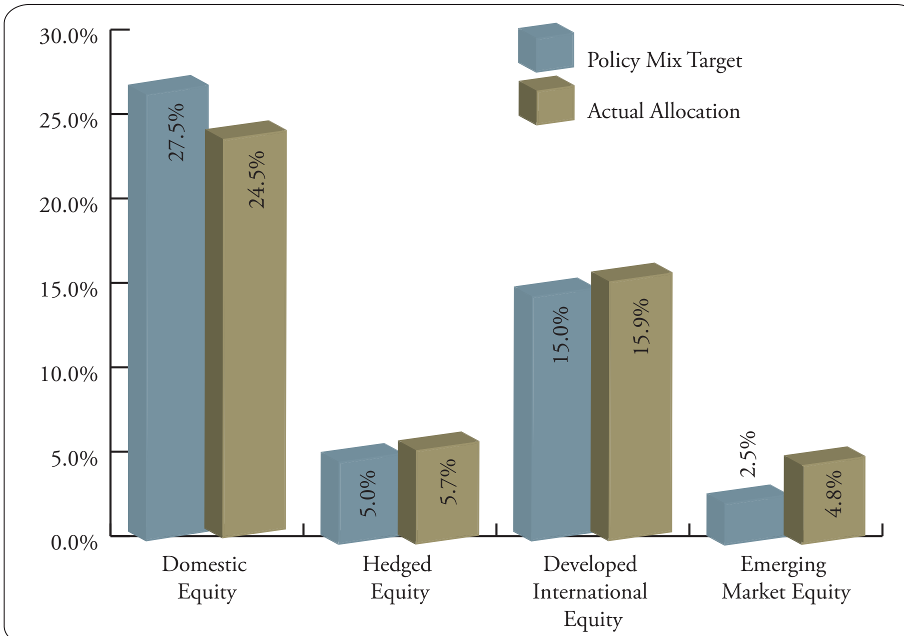
The public equity portfolio underwent additional changes to move the total fund closer to full implementation of the board's asset allocation adopted in June of 2002 as a result of the asset/liability study. Here are just a few of the highlights:

- The international developed equity policy benchmark allocation was reduced to 15% during the fiscal year to bring it in line with the board's policy allocation.
- Blakeney Management was hired to manage an emerging market equity allocation.
- Grantham, Mayo, Van Otterloo & Co. (GMO) was hired to manage an emerging market equity allocation.

**Portfolio Structure**
The public equity portfolio has a target allocation of 50% of the total fund as illustrated in the pie chart above. The portfolio is comprised of four sub-asset classes which include domestic equity, hedged equity, international developed equity, and emerging market equity. The bar chart below illustrates the actual allocation relative to the board's policy allocation for each sub-asset class. This reflects the CIO's strategic decisions to overweight or underweight sub-asset classes as of June 30, 2004. These decisions are confined to pre-established ranges set by the board to provide risk controls within the portfolio. The table at the bottom of this page summarizes the sub-allocation ranges established by the board.

**Market Overview**
The equity markets in FY04 rebounded strongly from the negative returns generated in each of three previous fiscal years. U.S. equities returned 20% for FY04. The developed international markets did even better with a 29% return, while emerging markets led the pack with a return of 33%. However, returns were not evenly distributed

**Public Equity Policy vs. Actual Allocation (As a Percentage of the Total Fund)**




**Public Equity Strategic Sub-Asset Allocation Ranges (As a Percentage of the Total Fund)**

| Sub-Asset Class | Minimum | Maximum | Policy Target |
|---|---|---|---|
| Domestic Equity | 15.0% | 40.0% | 27.5% |
| Hedged Equity | 0.0 | 10.0 | 5.0 |
| Developed International Equity | 5.0 | 25.0 | 15.0 |
| Emerging Market Equity | 0.0 | 5.0 | 2.5 |

throughout the year as the first six months provided about 80% of the returns.

Performance in the first half might be attributed to several things. The economy improved as did investor psychology. Unemployment dropped to the lowest levels since October of 2002 and fewer people were losing jobs. But likely the most important factor was improvement in corporate earnings. During the second half, focus had shifted to the belief that higher interest rates were around the corner, and the reality of higher energy prices were felt at the gas pumps. Both of these factors contributed to a lackluster second half with the U.S. market up a modest 3.5%.

The non-U.S. markets followed the U.S. lead for the most part. The first half provided over 85% of the return as the major international markets saw conditions similar to the domestic market. Rising oil prices and the threat of a slow down in China put a damper on the positive mood. For the final six months of the fiscal year, the market was up a little over 4%. The Japanese market was up 40% in U.S. dollar terms after many poor years. The decline in the value of the dollar added over 10% of this return.

MOSERS continues to be concerned about returns from equities in the future. It appears that all equity markets are at best fairly valued. The U.S. presidential election, events in the Middle East, and the threat of terrorism could impact the markets in the near-term while in the longer-term, valuations will be the driving force behind returns.

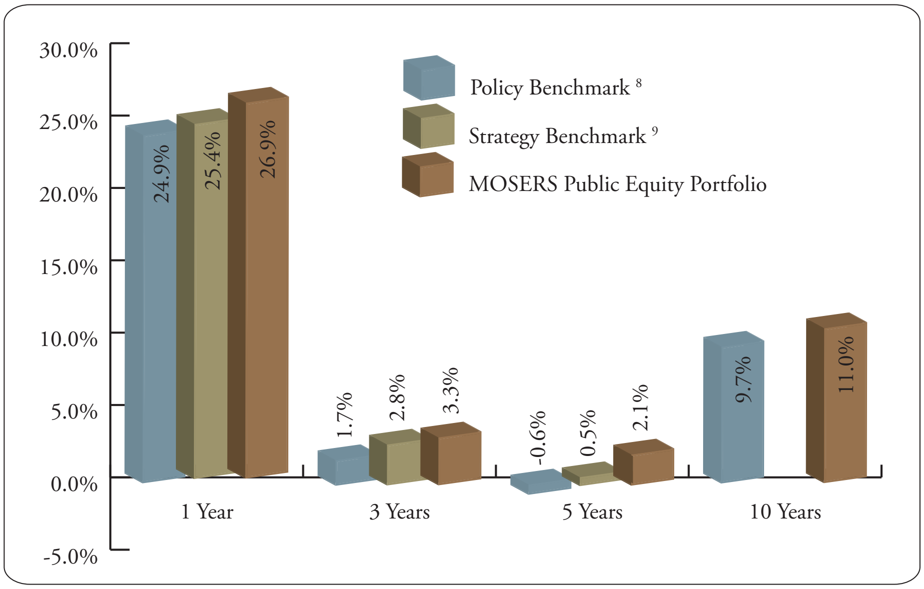
**Performance**

The public equity portfolio returned 26.9% for the fiscal year, exceeding the policy benchmark return of 24.9% and the strategy benchmark return of 25.4% as illustrated in the bar chart at the top of this page. FY04 proved to be an exceptional year for the public equity markets, both domestically and internationally. The positive performance of the actual portfolio relative to the policy benchmark shows the value added by staff and the external asset consultant through strategic decisions and manager selection decisions. The strategy benchmark is compared to the policy benchmark to capture the value added by strategic allocation decisions. In FY04, 0.5%, or approximately $13.5 million of value was added through strategic allocation decisions. In order to capture the impact of manager selection decisions, the actual return is compared to the strategy benchmark. In FY04, manager selection decisions added 1.5% of performance, or approximately $39 million.

**Top 10 Holdings**

The top 10 holdings within the public equity portfolio as of June 30, 2004, are illustrated in the table above. A complete listing of holdings is available upon request.

**Public Equity Return vs. Benchmarks**




**Public Equity Allocation - Top Ten Holdings**

| Ten Largest Holdings as of June 30, 2004 | Market Value | Percent of Total MOSERS Public Equity Portfolio |
|---|---|---|
| General Electric Co. | $33,225,876 | 1.1% |
| Microsoft Corp. | 31,112,464 | 1.0 |
| Pfizer Inc. | 27,834,332 | 0.9 |
| Talisman Energy Inc. | 19,038,986 | 0.6 |
| Cicso Systems Inc. | 18,778,268 | 0.6 |
| Tesco Plc | 18,458,972 | 0.6 |
| Citigroup Inc. | 17,913,288 | 0.6 |
| Intel Corp. | 17,540,021 | 0.6 |
| Applied Materials Inc. | 17,459,603 | 0.6 |
| Exxon Mobil Corp. | 17,272,381 | 0.6 |

8 As of 6/30/04, the public equity policy benchmark was comprised of the following components: 65% Russell 3000, 30% MSCI EAFE Net, and 5% MSCI EMF.

9 As of 6/30/04, the public equity strategy benchmark was comprised of the following components: 48.1% domestic equity strategy benchmark (comprised of the S&P 500, Russell 2500 Value, and Russell 3000), 11.2% Russell 3000, 31.2% MSCI EAFE Net, and 9.5% MSCI EMF.

## DOMESTIC EQUITY

**Market Value**
The domestic equity allocation was $1.4 billion, or 24.5% of the total fund as of June 30, 2004.

**Summary of Portfolio**
MOSERS maintains a significant allocation to publicly-traded shares of corporations domiciled in the U.S. Domestic equities are held in broadly diversified portfolios representing a variety of styles, sectors, and market capitalizations. The domestic equity component is expected to contribute significantly to the fund's achievement of a long-term real return in excess of the 5% objective set by the board due to equities' historic return premium over inflation. In addition, MOSERS would expect this component to perform well in periods of falling inflation and rising growth and offer income potential through dividend payments. As of June 30, 2004, MOSERS was underweight relative to the policy benchmark in this sub-asset class as valuations relative to the other sub-asset classes within public equity appear somewhat high. In addition, a continued weakening in the dollar is expected and should hurt this sub-asset class relative to the non-U.S. equity alternatives.

**Statistics**
The table at top right displays the statistical characteristics of the domestic equity portfolio as of June 30, 2004, with comparisons shown to the Russell 3000 Index.

**Investment Advisors**
As of June 30, 2004, MOSERS had contracts with eight external investment advisors who manage 80% of the domestic equity portfolio. The remaining 20% is managed internally by staff in a passive S&P 500 Index fund. In FY04 there were no new managers hired or terminated within the domestic equity portfolio. Management expenses for these managers can be found on page 71 under the total fund overview section of this report. A listing of these managers is provided in the middle table above.

**Brokerage Activity**
Brokerage activity within the domestic equity portfolio throughout the fiscal year is captured on the page 75.

**Soft Dollar Expenditures**
In the fiscal year ended June 30, 2004, MOSERS' domestic equity managers declared $244,711 of the commissions generated were utilized to acquire a variety of services and research information. These expenditures, referred to as soft dollars (expendable excess commissions), are permitted under current SEC guidelines and represent 11.8% of MOSERS' agency commissions. These expenditures are illustrated in the bottom table above.

### Statistics

| Characteristics | Domestic Equity Portfolio | Russell 3000 |
|---|---|---|
| Number of securities | 1,075 | 2,998 |
| Average market capitalization | $60.2 B | $77.2 B |
| Portfolio yield | 1.3 | 1.6 |
| Portfoio P/E | 23.2 | 21.3 |
| Portfolio beta vs. Russell 3000 | 1.2 | 1.0 |
| Price/Book ratio | 2.8 | 2.9 |

### Schedule of Investment Advisors

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| AmeriCap Advisers, LLC | Active all-cap | $ 169,811,419 |
| Capital Guardian Trust Company | Active all-cap | 172,921,586 |
| Dimensional Fund Advisors, Inc. | Enhanced SMID-cap | 170,523,079 |
| Internal Staff | Passive S&P 500 Index | 292,425,784 |
| Legg Mason Capital Management, Inc. | Active all-cap | 164,757,050 |
| NISA Investment Advisors, LLC | Domestic equity futures - rebalancing program | 40,429,888 |
| Oak Associates, Ltd. | Active all-cap | 130,718,489 |
| OakBrook Investments | Enhanced S&P 500 Index | 302,111,943 |
| Total | | $1,443,699,238 |

### Soft Dollar Expenditures

| Types of Services Acquired | Commissions Used | Percentage of Total |
|---|---|---|
| Trading/Analytic Systems | $ 87,461 | 35.7% |
| Research Services | 35,902 | 14.7 |
| Portfolio Mgmt. Systems | 6,610 | 2.7 |
| Pricing Services | 3,904 | 1.6 |
| Exchange Fees | 8,560 | 3.5 |
| Transaction Cost Analysis | 23,700 | 9.7 |
| Market Research | 78,574 | 32.1 |
| Total | $244,711 | 100.0% |

## Domestic Equity Brokerage Activity

| Brokerage Firm | Shares Traded | Dollar Volume of Trades | Commissions Dollar Amount | Commissions Value Per Share |
|---|---|---|---|---|
| U.S. Clearing | 47,556,271 | $ 487,521,263 | $ 656,862 | $0.01 |
| Instinet | 10,552,477 | 212,705,040 | 229,390 | 0.02 |
| Jefferies & Co. | 6,934,565 | 225,706,679 | 175,937 | 0.03 |
| Cantor Fitzgerald | 4,807,992 | 166,729,511 | 104,274 | 0.02 |
| Bear Stearns | 7,662,010 | 121,344,408 | 93,236 | 0.01 |
| Citigroup Global Markets | 2,620,635 | 62,299,917 | 89,067 | 0.03 |
| Goldman Sachs | 1,009,960 | 25,949,879 | 39,932 | 0.04 |
| Lynch, Jones & Ryan | 1,885,254 | 32,542,865 | 38,103 | 0.02 |
| Guzman & Co. | 2,613,506 | 67,677,239 | 37,985 | 0.01 |
| CS First Boston | 845,111 | 23,756,097 | 33,696 | 0.04 |
| B Trade Services LLC | 1,080,419 | 13,628,917 | 32,873 | 0.03 |
| Merrill Lynch | 643,464 | 17,190,915 | 29,921 | 0.05 |
| Knight Securities Broadcort | 511,380 | 10,738,818 | 24,113 | 0.05 |
| Capital Institutional Services | 440,972 | 7,316,264 | 23,006 | 0.05 |
| Jones & Associates | 450,949 | 8,279,029 | 21,265 | 0.05 |
| Bank of America | 392,000 | 11,372,694 | 17,368 | 0.04 |
| Investment Technology Group | 946,488 | 17,246,350 | 17,066 | 0.02 |
| Lehman Brothers | 591,210 | 17,762,027 | 16,162 | 0.03 |
| Weeden & Co. | 308,500 | 6,537,428 | 16,130 | 0.05 |
| Heflin & Co. | 311,400 | 5,899,266 | 14,876 | 0.05 |
| Nutmeg Securities | 289,100 | 6,589,627 | 14,876 | 0.05 |
| ISI Group Inc. | 291,000 | 12,572,090 | 14,550 | 0.05 |
| Williams Capital Group | 251,700 | 4,619,168 | 12,585 | 0.05 |
| Bridge Trading | 230,600 | 4,236,874 | 9,627 | 0.04 |
| La Branche Financial | 188,400 | 2,479,531 | 8,927 | 0.05 |
| National Financial Services | 172,761 | 2,916,664 | 8,897 | 0.05 |
| Oppenheimer & Co. | 175,400 | 1,588,457 | 8,767 | 0.05 |
| Suntrust Capital Markets | 160,000 | 2,938,820 | 8,585 | 0.05 |
| Morgan Stanley | 180,600 | 6,117,092 | 8,100 | 0.04 |
| Allen & Co. | 235,384 | 3,693,117 | 7,989 | 0.03 |
| Raymond James | 147,000 | 3,578,848 | 7,742 | 0.05 |
| Charles Schwab | 148,664 | 2,327,768 | 7,159 | 0.05 |
| Fidelity Capital Markets | 124,850 | 3,371,404 | 7,065 | 0.06 |
| Strome Susskind | 120,600 | 3,854,783 | 7,012 | 0.06 |
| A.G. Edwards & Sons | 165,300 | 1,405,821 | 6,975 | 0.04 |
| Other (35 additional brokerage firms) | 2,352,606 | 56,845,147 | 108,729 | 0.05 |
| Total | 97,398,528 | $1,661,339,817 | $1,958,847 | 0.02 |

## HEDGED EQUITY

**Market Value**
The hedged equity allocation was $336.5 million or 5.7% of the total fund as of June 30, 2004.

**Summary of Portfolio**
The hedged equity portfolio was added to the total fund in FY03. Hedged equity managers utilize skill-based investment strategies, which allow them to take advantage of periodic inefficiencies that may exist within the market. Hedged equity managers seek to produce consistent returns in various economic environments. The ultimate goal within the public equity portfolio is to provide downside protection in slumping equity markets. MOSERS utilizes a fund-of-funds approach to gain exposure to this asset class. This portfolio targets about 40% of the volatility of the broad U.S. equity market which should help to cushion total fund returns during periods of negative returns from stocks. As of June 30, 2004, MOSERS' weight to this sub-asset class was slightly over the policy allocation weight of 5%.

**Statistics**
The table at top right displays the statistical characteristics of the hedged equity portfolio for MOSERS as of June 30, 2004.

### Statistics

| Characteristics | For Life of the Fund |
|---|---|
| Number of managers within the fund | 20 |
| Annualized return (net) | 10.3% |
| Annualized standard deviation | 3.5% |
| Sharpe ratio | 2.6 |
| Beta (0.4 relative to the S&P 500 Index) | 0.2 |
| Alpha (annualized) | 4.4% |
| Index correlation - S&P 500 Index | 0.7 |

### Schedule of Investment Advisors

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| Blackstone Alternative Asset Management | Long/short | $336,449,126 |

**Investment Advisors**
In FY04, MOSERS increased its allocation with Blackstone Alternative Asset Management, whom was hired in FY03 as a strategic partner to make investments within the hedged equity sub-asset class. In addition, Blackstone provides ongoing consulting and education to staff. The second table above summarizes our investments with them as of June 30, 2004. Management fee information may be found on page 71 of this report.

## INTERNATIONAL DEVELOPED EQUITY

**Market Value**
As of June 30, 2004, the international developed equity portfolio was $935.8 million, or 15.9% of the total fund.

**Summary of Portfolio**
MOSERS' international developed equity allocation allows for the participation in the growth of non-U.S. companies. Historically, this asset class has delivered returns in excess of inflation, thus enhancing the total fund's ability to achieve the RRO of 5%. It is anticipated that this sub-asset class will perform well in periods of falling inflation and periods of rising growth. In addition, this asset class provides diversification to the total equity portfolio. As of June 30, 2004, MOSERS' allocation was slightly over the policy allocation target of 15%.

**Statistics**
The table at top right displays the statistical characteristics of the international developed equity portfolio as of June 30, 2004, with comparisons shown to the Morgan Stanley Capital International Europe and Australia, Far East Equity Index (MSCI EAFE).

**Investment Advisors**
As of June 30, 2004, MOSERS had contracts with three external investment advisors for the management of three separate international developed equity portfolios. Two of these advisors are managing active portfolios and are expected to add incremental returns over the MSCI EAFE Index through stock selection, country selection, and small amounts of currency hedging. The third manager runs an enhanced index portfolio that is expected to add small amounts of return over the MSCI EAFE Index while matching country weights within the index.

### Statistics

| Characteristics | International Developed Equity Portfolio | MSCI EAFE Index |
|---|---|---|
| Number of securities | 1002 | 1066 |
| Average market capitalization | $18.0 B | $43.8 B |
| Portfolio yield | 2.3 | 2.4 |
| Portfolio P/E | 23.1 | 16.2 |
| Portfolio beta vs. MSCI EAFE | 0.9 | 1.0 |
| Price/Book ratio | 1.5 | 2.3 |

### Schedule of Investment Advisors

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| Mastholm Asset Management, LLC | Active growth | $402,865,504 |
| Merrill Lynch Asset Management Group | Enhanced EAFE | 86,015,313 |
| NISA Investment Advisors, LLC | Int'l futures - rebalancing program | 0 |
| Silchester International Investors | Active value | 446,882,821 |
| Total | | $935,763,638 |

### Soft Dollar Expenditures

| Types of Services Acquired | Commissions Used | Percentage of Total |
|---|---|---|
| Pricing Services | $ 14,760 | 12.4% |
| Research Services | 104,540 | 87.6 |
| Total | $ 119,300 | 100.0% |

The middle table above displays the firms that were under contract with MOSERS during FY04 for management of international developed equity portfolios. Information on management fees paid may be found on page 71 of this report.

**Brokerage Activity**
Brokerage activity within the international developed equity portfolio throughout the fiscal year may be found in the table on page 78.

**Soft Dollar Expenditures**
In the fiscal year ended June 30, 2004, MOSERS' international developed equity managers declared $119,300 of the commissions generated were utilized to acquire a variety of services and research information. These expenditures, referred to as soft dollars (expendable excess commissions), are permitted under current SEC guidelines, and represent 1.1% of MOSERS' agency commissions. The third table above illustrates these expenditures.

## International Developed Equity Brokerage Activity

| Brokerage Firm | Shares Traded | Dollar Volume of Trades | Commissions Dollar Amount | Commissions Basis Points |
|---|---|---|---|---|
| ABG Sundal Collier | 3,230,600 | $ 31,956,629 | $ 63,913 | 20.0 |
| ABN AMRO | 592,119 | 12,675,680 | 24,358 | 19.2 |
| BNP Paribas | 1,947,400 | 43,179,129 | 86,172 | 20.0 |
| BNP Securities | 235,500 | 2,236,376 | 3,945 | 17.6 |
| Cantor Fitzgerald | 1,023,600 | 24,907,007 | 33,617 | 13.5 |
| Chevereux | 1,307,610 | 22,478,718 | 44,389 | 19.8 |
| CI Nordic Securities | 124,200 | 1,277,157 | 2,554 | 20.0 |
| Credit Lyonnais | 2,080,600 | 23,203,431 | 46,581 | 20.1 |
| CS First Boston | 14,037,421 | 121,927,169 | 237,963 | 19.5 |
| Daiwa Securities | 9,733 | 2,305,960 | 3,459 | 15.0 |
| DB Alex Brown | 105,100 | 1,236,596 | 1,855 | 15.0 |
| Deutche Bank | 2,812,475 | 36,493,971 | 75,845 | 20.8 |
| Dresdner Kleinwort | 158,800 | 1,813,715 | 3,627 | 20.0 |
| Enskilda Securities | 628,000 | 11,089,630 | 22,179 | 20.0 |
| Exane | 349,000 | 5,938,757 | 11,878 | 20.0 |
| Goldman Sachs | 2,036,334 | 23,116,579 | 37,656 | 16.3 |
| JB Were | 2,564,800 | 20,282,564 | 46,321 | 22.8 |
| JP Morgan | 2,637,516 | 50,610,542 | 94,546 | 18.7 |
| Lehman Brothers | 892,765 | 17,117,222 | 25,974 | 15.2 |
| Mainfirst Bank | 1,226,300 | 28,817,527 | 57,466 | 19.9 |
| Merrill Lynch | 18,265,002 | 161,636,734 | 293,762 | 18.2 |
| Mizuho Securities | 1,502,980 | 15,678,236 | 23,517 | 15.0 |
| Morgan Stanley | 10,544,225 | 133,853,372 | 216,225 | 16.2 |
| Neonet Securities | 1,973,500 | 25,559,621 | 15,336 | 6.0 |
| Nesbitt Burns | 129,600 | 4,610,094 | 4,850 | 10.5 |
| Net Fondkommission | 327,600 | 5,771,231 | 3,463 | 6.0 |
| Nomura | 5,084,386 | 48,544,895 | 73,243 | 15.1 |
| Oppenheim | 143,200 | 8,971,739 | 17,943 | 20.0 |
| Sanford C. Bernstein | 1,536,200 | 14,204,189 | 24,439 | 17.2 |
| SC Bernstein | 451,600 | 7,935,984 | 14,475 | 18.2 |
| SG Securities | 1,193,600 | 9,808,569 | 19,617 | 20.0 |
| Societe Generale | 2,690,600 | 34,085,691 | 60,958 | 17.9 |
| Svenska Handelsbanke | 331,700 | 3,483,766 | 6,968 | 20.0 |
| TD Waterhouse | 99,600 | 2,316,080 | 3,752 | 16.2 |
| UBS Warburg | 14,326,297 | 152,274,081 | 282,464 | 18.6 |
| Total | 96,599,963 | $1,111,398,641 | $1,985,310 | |
| | | | | |
| Zero commission trades (excluded from above) | 789,357 | $ 16,878,011 | | |

## EMERGING MARKET EQUITY

### Market Value
As of June 30, 2004, the emerging market equity portfolio was $283 million, or 4.8% of the total fund.

### Summary of Portfolio
The emerging market equity allocation allows for the participation in the growth of companies in emerging economies outside of the U.S. It is anticipated that this sub-asset class will perform well in periods of rising inflation, as these economies tend to be driven by commodity businesses. In addition, this asset class provides diversification to the total equity portfolio. As of June 30, 2004, MOSERS' allocation was 4.8% of the total fund, nearly double the policy allocation target of 2.5%. This sub-asset class is overweight due to MOSERS' belief that valuations are still attractive relative to the domestic market.

### Equity Statistics
The table at top right displays the statistical characteristics of the emerging market equity portfolio as of June 30, 2004, with comparisons shown to the Morgan Stanley Capital International Emerging Markets Free Index (MSCI EMF).

### Statistics

| Characteristics | International Emerging Market Equity Portfolio | MSCI EMF |
|---|---|---|
| Number of securities | 631 | 722 |
| Average market capitalization | $7.2 B | $12.6 B |
| Portfolio yield | 2.7% | 2.6% |
| Portfoio P/E | 10.8 | 9.8 |
| Portfolio beta vs. MSCI EMF | 0.8 | 1.0 |
| Price/Book ratio | 2.3 | 2.3 |

### Schedule of Investment Advisors

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| Blakeney Management | Active emerging markets | $ 56,499,644 |
| GMO, LLC | Active emerging markets | 87,844,676 |
| Merrill Lynch Quantitative Advisors | Enhanced MSCI Emerging Markets Free Index | 97,664,000 |
| Oaktree Capital Management, LLC | Long/short | 40,958,275 |
| Total | | $282,966,595 |

### Investment Advisors
As of June 30, 2004, MOSERS had four emerging market equity managers. Throughout the fiscal year, two managers were hired in this sub-asset class for active mandates. These managers included Blakeney Management and Grantham, Mayo, Van Otterloo & Co. (GMO).

The second table above displays the firms under contract with MOSERS during FY04 for the management of emerging market equity portfolios. Information regarding management fees may be found on page 71 of this report.

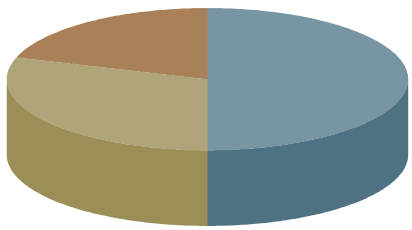
### Brokerage Activity
The table at the bottom of this page summarizes brokerage activity which occurred within the emerging market equity portfolio throughout the fiscal year. Information in the table is strictly for the Merrill Lynch portfolio.

### Soft Dollar Expenditures
There was no soft dollar activity within this sub-asset class within FY04.

### Brokerage Activity

| Brokerage Firm | Shares Traded | Dollar Volume of Trades | Commissions Dollar Amount | Commissions Basis Points |
|---|---|---|---|---|
| Banco Santander | 1,088,748 | $ 1,104,465 | $ 2,319 | 21.0 |
| Chase | 790,850 | 543,521 | 544 | 10.0 |
| Citibank | 79,655 | 147,990 | 444 | 30.0 |
| Citigroup Global Markets | 22,000 | 8,179,966 | 1,227 | 1.5 |
| Deutsche Bank | 1,262 | 386,573 | 966 | 25.0 |
| HSBC | 2,362,992 | 11,763,596 | 44,138 | 37.5 |
| Instinet | 23,900 | 1,513,505 | 478 | 3.2 |
| JP Morgan | 142,116,857 | 86,052,814 | 201,854 | 23.5 |
| Lasker Stone & Stern | 26,904 | 856,708 | 807 | 9.4 |
| MBI Correadores DE B | 766,256 | 114,547 | 344 | 30.0 |
| Morgan Stanley | 5,847,259 | 12,679,239 | 21,237 | 16.8 |
| UBS Warburg | 14,505,893 | 17,723,381 | 33,889 | 19.1 |
| Total | 167,632,576 | $ 141,066,305 | $ 308,247 | |
| Zero commission trades excluded from above | 789,357 | $16,878,011 | | |

# Public Debt Asset Class Summary



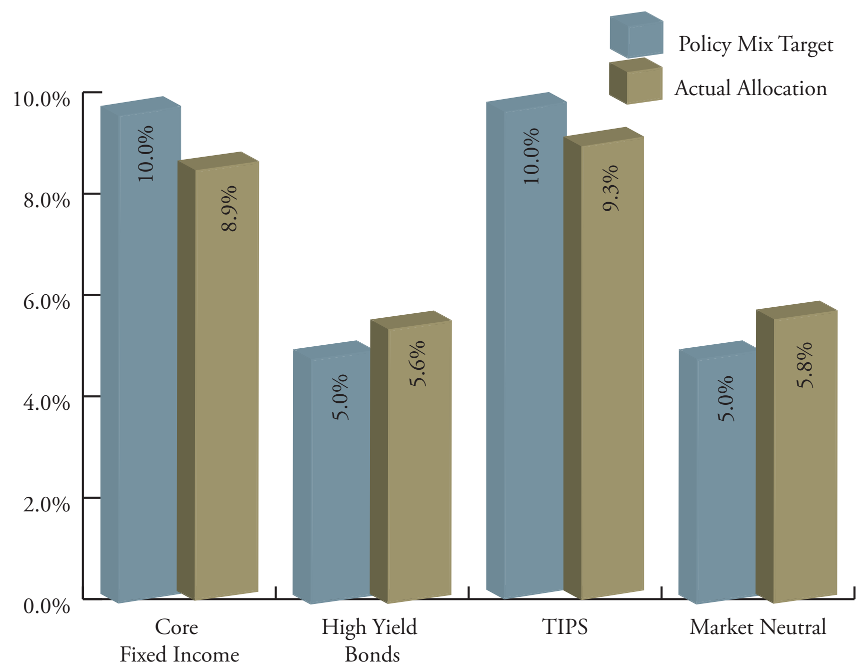

**Highlights**
As of June 30, 2004, the public debt allocation had a market value of $1.7 billion, representing 29.6% of the total fund. There was very little activity within this asset class in the fiscal year.

**Portfolio Structure**
The public debt portfolio has a target allocation of 30% of the total fund as illustrated in the pie chart above. This portfolio is comprised of four sub-asset classes which include core fixed income, high yield bonds, Treasury Inflation Protected Securities (TIPS), and market neutral. The bar chart to the right illustrates the actual sub-asset allocations relative to the board's policy allocation for each of these sub-asset classes. This reflects the CIO's strategic decisions to overweight or underweight sub-asset classes as of June 30, 2004. These decisions are confined to pre-established ranges set by the board to provide risk controls within the portfolio. The table at the bottom of this page summarizes the sub-allocation ranges established by the board.

**Market Overview**
The bond market over the course of the fiscal year was characterized by a stable fed funds rate policy. The target for fed funds remained at 1% throughout the fiscal year except for an increase to 1.25% at the very end of June 2004. The Federal Reserve has long taken a very gradualistic approach to monetary policy, so it was no surprise that they would keep short rates stable until very clear and confirming signals emerged as to the economic recovery. Long-term rates, on the other hand, were fairly volatile, reflecting a great deal of investor uncertainty as to the length and magnitude of the economic recovery and subsequent inflationary prospects. Long rates started the fiscal year at approximately 4.7%, then proceeded to rise as high as 5.4% before returning to the 4.7% level only to rise once again up through 5.5% and finally ending the year at about 5.2%.

In such a difficult interest rate environment, the only safe haven in bonds for the fiscal year was in

**Public Debt Policy vs. Actual Allocation (As a Percentage of the Total Fund)**




**Public Debt Strategic Sub-Asset Allocation Ranges (As a Percentage of the Total Fund)**

| Sub-Asset Class | Minimum | Maximum | Policy Target |
|---|---|---|---|
| Core Fixed Income | 5.0% | 15.0% | 10.0% |
| High Yield Bonds | 0.0 | 10.0 | 5.0 |
| TIPS | 5.0 | 15.0 | 10.0 |
| Market Neutral | 0.0 | 10.0 | 5.0 |

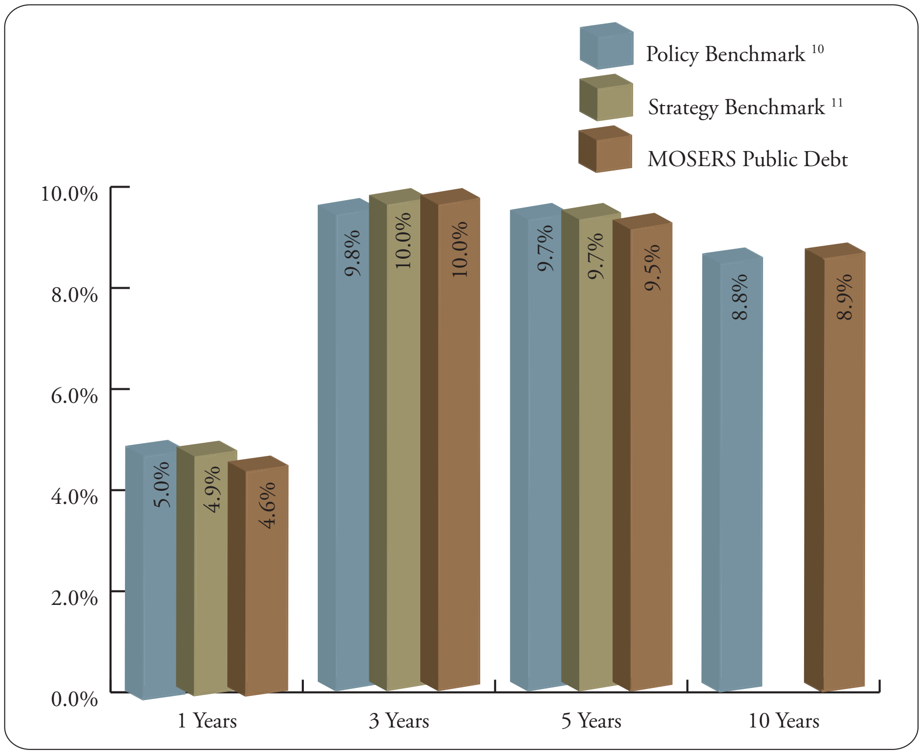
taking credit risk, the more the better. Corporate America experienced double digit profitability growth. Coupled with that was much more fiscal discipline on the part of corporate treasurers to improve balance sheets by retiring debt or just simply allowing cash balances to grow as opposed to embarking on massive capital spending programs. Default levels declined rapidly and there was a clear turn in the trend of ratings agencies' downgrades that were experienced in 2002 and the first half of 2003.

In summary, the safety of treasury securities was clearly not the place to be for FY04 from an absolute return perspective; however, on a relative basis, investors were rewarded significantly in asset-backed securities and investment grade corporates (100 to 170 basis points of excess return) and especially so in high yield where the excess return was more than 1,100 basis points.

**Performance**

The public debt portfolio returned 4.6% for the fiscal year, falling short of the policy benchmark return of 5% and the strategy benchmark return of 4.9%. During the fiscal year, strategy underweights and overweights were not substantial, so the major cause of underperformance was in the implementation of the strategies. The most significant amount of underperformance relative to the benchmark was experienced in the core fixed income sub-asset class. This was the result of the intentional decision to underweight credit exposure given the mild overweight to credit risk in the high yield sub-asset class where it was viewed that the risk/return profile was better than for investment grade corporates. Longer-term portfolio returns compare well to the policy and strategy benchmarks. The bar chart above illustrates performance over longer periods of time.

**Public Debt Return vs. Benchmarks**




**Public Debt Allocation - Top Ten Holdings**

| Ten Largest Holdings as of June 30, 2004 | Market Value | Percent of Total MOSERS Public Debt Portfolio |
|---|---|---|
| U.S. Treasury Inflation Index NT - 2.000%, '14 | $329,059,052 | 18.9% |
| U.S. Treasury Inflation Index NT - 3.000%, '12 | 98,121,850 | 5.6 |
| U.S. Treasury Inflation Index NT - 4.250%, '10 | 73,796,115 | 4.2 |
| U.S. Treasury NT - 3.125%, '08 | 43,533,547 | 2.5 |
| U.S. Treasury Inflation Index BD - 3.875%, '29 | 40,997,591 | 2.4 |
| U.S. Treasury Notes - 05.000%, '11 | 30,547,099 | 1.8 |
| U.S. Treasury Notes - 1.625%, '05 | 26,899,338 | 1.5 |
| U.S. Treasury Notes - 4.250%, '13 | 22,186,602 | 1.3 |
| U.S. Treasury Bonds - 08.125%, '19 | 21,680,429 | 1.2 |
| U.S. Treasury Bonds - 05.375%, '31 | 19,669,623 | 1.1 |

**Top 10 Holdings**

The top 10 holdings within the public debt portfolio as of June 30, 2004, are illustrated in the table above. A complete list of holdings within the public debt portfolio is available upon request.

10 As of 6/30/04, the public debt policy benchmark was comprised of the following components: 33.3% Lehman Aggregate, 33.3% Lehman U.S. TIPS, 16.7% Lehman High Yield, 16.7% T-Bills + 4%.

11 As of 6/30/04, the public debt strategy benchmark was comprised of the following components: 29.9% core bond strategy (includes Lehman MBS/ABS 67%/33% hybrid, Lehman U.S. Government Credit), 31.4% Lehman U.S. TIPS, 19% Lehman High Yield, 19.7% T-Bills + 4%.

## CORE FIXED INCOME

### Statistics

| Characteristics | Core Fixed Income Portfolio | Lehman Aggregate Bond Index |
|---|---|---|
| Total number of securities | 326 | 5,700 |
| Current yield | 4.5% | 5.2% |
| Yield to maturity | 4.1% | 4.7% |
| Average life/maturity | 11.1 | 7.5 |
| Adjusted duration | 4.2 | 4.8 |
| Quality | AAA | AA1 |

### Schedule of Investment Advisors

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| BlackRock Financial Management, Inc. | Enhanced mortgage-backed and asset-backed securities index | $174,451,598 |
| NISA Investment Advisors, LLC | Enhanced gov't/corp index | 269,450,160 |
| NISA Investment Advisors, LLC | Fixed income futures - rebalancing account | 77,960,376 |
| Total | | $521,862,134 |

### Brokerage Activity

| Broker/Dealer Firms | Par Amount Traded | Market Value Traded | Percent of Total Trading Volume by Market Value |
|---|---|---|---|
| Goldman Sachs | $1,254,381,392 | $1,278,633,104 | 23.4% |
| Morgan Stanley | 1,059,364,979 | 1,064,853,250 | 19.5 |
| Credit Suisse First Boston | 708,389,514 | 722,184,498 | 13.2 |
| Lehman Brothers | 572,785,929 | 577,396,335 | 10.6 |
| Citigroup | 482,860,305 | 491,844,835 | 9.0 |
| Banc of America | 239,356,181 | 238,949,034 | 4.4 |
| Chase Securities | 201,147,518 | 203,764,669 | 3.7 |
| Merrill Lynch | 197,170,247 | 199,214,847 | 3.6 |
| Deutsche Bank | 190,835,249 | 194,865,978 | 3.5 |
| UBS Securities | 184,833,147 | 184,737,964 | 3.4 |
| Bear Stearns | 157,273,423 | 161,962,455 | 3.0 |
| Barclays | 65,020,000 | 65,841,583 | 1.2 |
| Greenwich Capital Markets | 57,320,000 | 59,458,382 | 1.1 |
| Other (8 brokers each < 1%) | 22,764,905 | 22,222,666 | 0.4 |
| Total | $5,393,502,789 | $5,465,929,600 | 100.0% |

**Market Value**
The core fixed income allocation was $521.9 million as of June 30, 2004, or 8.9% of the total fund, just slightly below its policy target of 10%.

**Summary of Portfolio**
The core fixed income sub-asset class gives the total fund exposure to high quality fixed income instruments which, in turn, provides stable cash flows and excellent liquidity to the portfolio. Types of fixed income securities held within this portfolio may include U.S. Treasuries, mortgage-backed securities, asset-backed securities, agency securities, and investment grade corporate bonds. While historically fixed income has not outperformed equities, the asset class does provide diversification to the portfolio in a variety of different economic scenarios. Core fixed income performs well particularly in periods of good economic growth and falling inflation. In addition, because of the generally high quality nature of the core segment, one can also expect adequate performance from the core portfolio in periods of modestly falling growth and stable inflation.

**Statistics**
The table at top right displays the statistical characteristics of the core fixed income portfolio as of June 30, 2004, with comparisons shown to the Lehman Aggregate Bond Index.

**Investment Advisors**
As of June 30, 2004, MOSERS had contracts with two external investment advisors for the management of three separate fixed income portfolios – one for mortgage-backed/asset-backed securities, one for government/corporate securities, and one a passively managed futures program utilized as a part of the total fund's rebalancing program.

The middle table above displays the investment advisors that were under contract with MOSERS during FY04 for management of core fixed income portfolios. Information regarding management fees paid to these managers may be found on page 71 of this report.

**Brokerage Activity**
The third table above shows MOSERS' core fixed income brokerage activity ranked by percentage of total, through the purchase and sale of core fixed income assets in FY04.

## HIGH YIELD BONDS

### Market Value
The high yield bond allocation was $331.3 million as of June 30, 2004, or 5.6% of the total fund.

### Summary of Portfolio
The high yield bond portfolio invests in debt securities whose credit ratings are below investment grade quality. Relative to the core fixed income portfolio, this sub-asset class provides superior coupon cash flow, as well as some diversification benefit due to a reduced sensitivity to changes in interest rates. MOSERS views this allocation as one that is likely to be changeable and very much dependent upon the particular stage of the economic cycle being experienced at the time of the allocation decision. As of June 30, 2004, MOSERS was slightly over the 5% policy target allocation to high yield bonds.

### Statistics
The table at top right displays the statistical characteristics of the high yield bond portfolio as of June 30, 2004, with comparisons shown to the Lehman High Yield Bond Index.

### Investment Advisors
As of June 30, 2004, MOSERS had a contract with one external investment advisor for the management of a high yield bond portfolio. Information related to this manager is included in the middle table to the right. For information on management fees paid, refer to the table on page 71 of this report.

### Statistics

| Characteristics | High Yield Bond Portfolio | Lehman High Yield Bond Index |
|---|---|---|
| Total number of securities | 241 | 1,652 |
| Current yield | 8.4% | 8.4% |
| Yield to maturity | 8.2% | 8.3% |
| Average life/maturity | 7.7 | 8.1 |
| Adjusted duration | 4.6 | 4.8 |
| Quality | B2 | B1/B2 |

### Schedule of Investment Advisors

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| BlackRock Financial Management, Inc. | Active high yield bond | $331,326,126 |

### Brokerage Activity

| Broker/Dealer Firms | Par Amount Traded | Market Value Traded | Percent of Total Trading Volume by Market Value |
|---|---|---|---|
| Credit Suisse First Boston | $139,399,447 | $139,232,783 | 16.2% |
| Citigroup | 122,995,750 | 122,581,784 | 14.3 |
| Chase Securities | 120,194,770 | 118,875,729 | 13.9 |
| Goldman Sachs | 106,515,950 | 103,324,499 | 12.1 |
| Bear Stearns | 67,415,100 | 68,145,240 | 7.9 |
| Banc of America | 54,641,500 | 54,075,747 | 6.3 |
| Lehman Brothers | 52,338,500 | 52,286,124 | 6.1 |
| Deutsche Bank | 32,916,000 | 33,269,078 | 3.9 |
| UBS Securities | 31,216,100 | 32,083,854 | 3.7 |
| Morgan Stanley | 30,420,000 | 30,692,058 | 3.6 |
| Merrill Lynch | 27,465,000 | 27,255,111 | 3.2 |
| Wachovia Capital | 16,170,000 | 16,605,331 | 1.9 |
| SG Americas Securities | 10,685,000 | 10,378,131 | 1.2 |
| Pershing LLC | 9,515,000 | 9,569,956 | 1.1 |
| Oppenheimer | 8,825,000 | 8,670,991 | 1.0 |
| Other (16 brokers each < 1%) | 29,827,315 | 30,728,463 | 3.6 |
| Total | $860,540,432 | $857,774,879 | 100.0% |

### Brokerage Activity
The third table above captures high yield bond brokerage activity ranked by percentage of total, through the purchase and sale of high yield assets in FY04.

## TREASURY INFLATION PROTECTED SECURITIES (TIPS)

**Market Value**
The TIPS allocation was $547.9 million, or 9.3% as of June 30, 2004.

**Summary of Portfolio**
TIPS are fixed income securities issued and guaranteed by the U.S. government. The yield on these securities is specifically tied to inflation, as measured by the U.S. consumer price index, plus a predetermined yield above and beyond inflation. The TIPS allocation provides an excellent match relative to the liabilities in terms of its ability to provide inflation protection. As of June 30, 2004, MOSERS was slightly under the 10% policy target allocation to TIPS.

**Statistics**
The table at top right displays the statistical characteristics of the TIPS portfolio as of June 30, 2004, with comparisons shown to the Lehman U.S. TIPS Index.

**Investment Advisors**
As of June 30, 2004, the TIPS portfolio was 100% internally managed. The middle table to the right summarizes the details.

**Brokerage Activity**
The third table to the right captures MOSERS' brokerage activity ranked by percentage of total, through the purchase and sale of TIPS for FY04.

### Statistics

| Characteristics | TIPS Portfolio | Lehman U.S. TIPS Index |
|---|---|---|
| Total number of securities | 4 | 12 |
| Current yield | 2.1% | 2.6% |
| Yield to maturity | 5.2% | 4.9% |
| Average life/maturity | 9.9 | 11.0 |
| Adjusted duration | 5.3 | 5.4 |
| Quality | Treasury | Treasury |

### Schedule of Investment Advisors

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| Internal Staff | Passive inflation-indexed bonds | $547,863,361 |

### Brokerage Activity

| Broker/Dealer Firms | Par Amount Traded | Market Value Traded | Percent of Total Trading Volume by Market Value |
|---|---|---|---|
| Barclays Capital | $594,105,000 | $ 736,156,594 | 70.6% |
| Deutsche Bank | 121,075,000 | 160,144,780 | 15.4 |
| Merrill Lynch | 124,650,000 | 145,966,014 | 14.0 |
| Total | $839,830,000 | $1,042,267,388 | 100.0% |

## MARKET NEUTRAL

**Market Value**
The market neutral allocation was $343.5 million, or 5.8% of the total fund as of June 30, 2004.

**Summary of Portfolio**
The market neutral portfolio consists of a variety of managers who utilize skill-based investment strategies, which allow them to take advantage of periodic inefficiencies that may exist within the market. The expectation for this sub-asset class is to produce consistent absolute returns in various economic environments. More directly, MOSERS expects this portfolio to generate returns of 4% in excess of returns on 90-day Treasury bills with volatility similar to what is expected from the core fixed income portfolio. Market neutral investments also provide diversification and downside protection to the portfolio. MOSERS utilizes a fund-of-funds approach to gain exposure to this sub-asset class. This allows MOSERS to invest in a pool comprised of a variety of different types of strategies which provides additional risk protection. As of June 30, 2004, MOSERS was slightly over the 5% policy target allocation to market neutral.

**Statistics**

| Characteristics | For the Life of the Fund |
|---|---|
| Number of managers within the fund | 36 |
| Annualized return (net) | 6.6% |
| Annualized standard deviation | 2.1% |
| Sharpe ratio | 2.7 |
| Beta (relative to the Lehman Aggregate Bond Index) | 0.2 |
| Alpha (annualized) | 1.5% |
| Index correlation - Lehman Aggregate Bond Index | 0.6 |

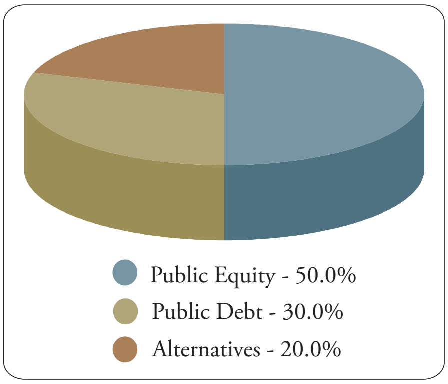
**Schedule of Investment Advisors**

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| Blackstone Alternative Asset Management, LP | Market neutral | $343,484,497 |

**Statistics**
The top table above displays the statistical characteristics of the market neutral portfolio as of June 30, 2004.

**Investment Advisors**
Blackstone Alternative Asset Management serves as a strategic partner to make investments within the market neutral sub-asset class and provides ongoing consulting and education to staff. The second table above summarizes MOSERS' investment with Blackstone in this category as of June 30, 2004. Information on manager fees paid can be found on page 71 of this report.

# Alternative Investments Asset Class Summary




**Highlights**
As of June 30, 2004, the alternative investments portfolio had a market value of $1.5 billion, representing 19.5% of the total fund. Performance for the fiscal year was 11.4% net of fees and expenses.

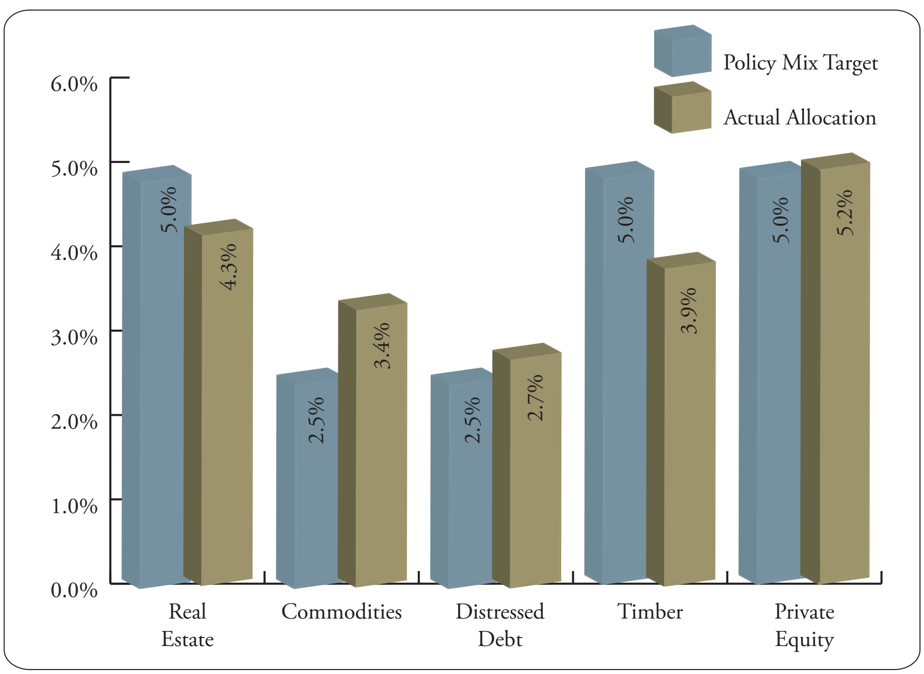
Several changes were made to the alternative investments portfolio throughout the year. Here are a few of the highlights:

- The private equity allocation was increased from 3% to 5% in April 2004 to reach the policy allocation target. A large portion of these assets reside in temporary accounts. They will be called by private equity managers when investment opportunities arise. Funding came from international developed equity. During FY04, MOSERS made its first commitment to two private equity managers totaling $60 million.
- MOSERS made its first allocation to timber by hiring two managers with a total commitment of $220 million. Up to $120 million has been committed to The Campbell Group to manage a Northwestern U.S. portfolio and $100 million has been committed to Resource Management Service, Inc. (RMS) to manage a Southeastern U.S. portfolio.

**Portfolio Structure**
The alternative investments portfolio is 20% of the total fund as illustrated in the pie chart to the left. Within this broad allocation are five distinct strategies (herein also referred to as "sub-asset classes") which include real estate, commodities, distressed debt, timber, and private equity. Over the past year, new investments were made in real estate and private equity. In addition, although two managers were hired within the timber sub-asset class, no timberland purchases have been made as of June 30, 2004. Within the real estate, timber, and private equity sub-asset classes, funds have been invested in liquid alternatives. They will be invested in their respective sub-asset classes only when the fund managers draw down capital to fund opportunities. It is anticipated that achieving full investment in these categories will take several years due to the nature of these sub-asset classes.

The bar chart below illustrates the board's policy allocation to the sub-asset class mix as of June 30, 2004. Strategic decisions to overweight or underweight

**Alternative Investments Policy vs. Actual Allocation (As a Percentage of the Total Fund)**



allocations relative to the policy mix are reflected in this chart. The table to the right summarizes the sub-asset class allocation ranges established by the board.

**Alternative Investments Strategic Sub-Asset Allocation Ranges (As a Percentage of the Total Fund)**

| Sub-Asset Class | Minimum | Maximum | Policy Target |
|---|---|---|---|
| Real Estate | 2.5% | 7.5% | 5.0% |
| Commodities | 0.0 | 5.0 | 2.5 |
| Distressed Debt | 0.0 | 5.0 | 2.5 |
| Timber | 2.5 | 7.5 | 5.0 |
| Private Equity | 2.5 | 7.5 | 5.0 |

**Market Overview**

The alternative investments allocation was added to the portfolio mix by the board in June of 2002. Alternative investments are expected to provide various benefits to the overall fund depending on the type of alternative. Some of these benefits include enhanced returns, diversification, inflation hedging, and deflation hedging. For example, the real assets in the program are expected to provide a hedge against inflation and diversify the entire portfolio. In addition, many of the sub-asset classes such as private equity and distressed debt are expected to produce returns greater than those produced by the public equity and public debt markets. Timber and core real estate investments are expected to produce less volatile return streams than traditional assets, therefore lowering the risk of the total fund.

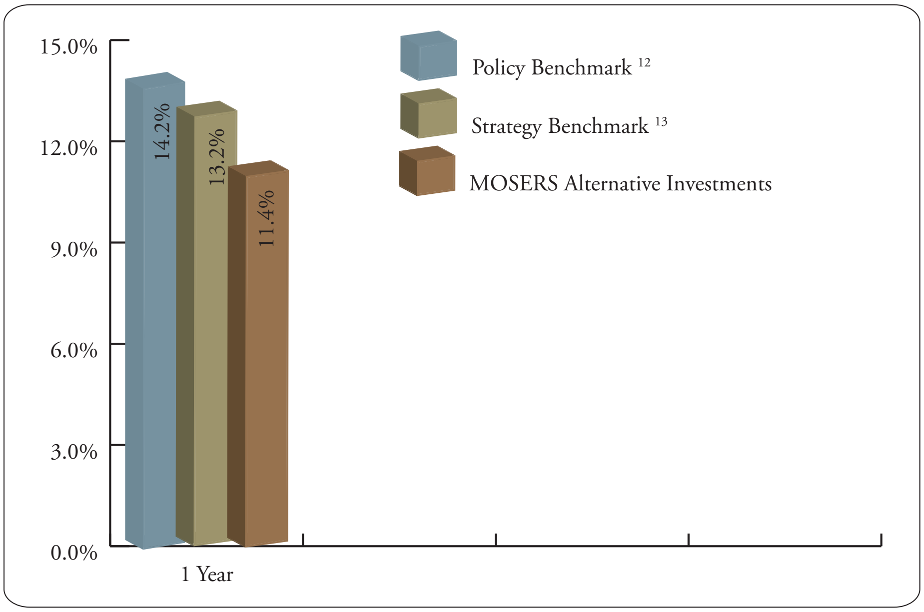
Despite the fact that the program is not fully implemented, returns produced by the existing alternative investments portfolio in FY04 were incredibly strong. A majority of the returns can be attributed to strong commodities markets and the surprising strength of the real estate market. Commodities outperformed many asset classes in FY04. Concerns related to the availability of future oil supplies and the demand for non-energy commodities led to significant returns in this sub-asset class. A few large economies, including the U.S. and China, remain a significant source of demand for many commodities. MOSERS currently has a slight overweight to commodities. Over the long-term, the commodities portfolio has exhibited a negative correlation to the equity markets and is expected to provide a hedge against unexpected spikes in inflation.

Another large contributor to the alternative investments return was the real estate portfolio. The REIT portion of the portfolio performed similarly to other public equity markets and continued to produce a dividend yield in excess of 5%. The real estate allocation has become further diversified over the past 12 months with the addition of a mezzanine loan portfolio and another opportunistic real estate fund. While the loan portfolio should generate income for MOSERS, the opportunistic real estate funds are expected to provide outstanding returns by capitalizing on global prospects in all real estate markets.

After an exceptional period of returns for distressed debt in FY03, the returns in this sub-asset class have reverted back to normal levels. As the equity markets performed well in this period of economic recovery, default rates subsided and the distressed debt markets grew cold. Similarly, the long maturity U.S. Treasury portfolio which has been held as a deflation hedge produced negative returns as fears of deflation subsided and inflation fears heated up.

Finally, the private equity and timber programs are very early in the implementation phase. Regional timber investment managers were hired throughout the fiscal year, and are expected to begin buying properties in FY05. There is a large supply of timberland coming to the market, so MOSERS believes that the first property will be purchased in the near future. Private equity commitments to buyout firms were initiated in FY04 and will continue to be made throughout the life of the program. MOSERS continues to believe that the venture capital market fundamentals are not enticing to new investors, and therefore MOSERS has not yet made commitments to these strategies.

**Alternative Investments Return vs. Benchmarks**




**Performance**

MOSERS' alternative investments portfolio returned 11.4% for the fiscal year, falling shy of the 14.2% return for the policy benchmark and 13.2% return for the strategy benchmark as illustrated in the above bar chart.

The underperformance is explained by the real estate sub-asset class and the distressed debt sub-asset class. In the real estate sub-asset class, the decision made by the CIO to sell a portion of the REIT portfolio with proceeds used to fund opportunistic real estate managers hurt the performance as REITs continued their strong performance throughout the fiscal year. Additionally, the distressed debt portfolio underperformed its benchmark largely as a result of the private equity-like structure of these investments. Returns are generally lower in the initial years of long-term limited partnerships as managers invest the funds over a period of several years. These partnerships typically realize gains later in the life of the fund after improvements to the portfolio companies have occurred and realizations have been made. This "J-Curve" pattern of returns is well-known in the private markets arena. Due to this phenomenon, performance compared to a market benchmark over short periods, especially early in the life of these funds, provides little useful information.

12 As of 6/30/04, the alternative investments policy benchmark was comprised of the following components: 25% Wilshire REIT, 25% actual return of the timber component, 25% actual return of the private equity component, 12.5% Lehman Brothers CCC + 2%, 12.5% GSCI (Goldman Sachs Commodity Index).

13 As of 6/30/04, the alternative investments strategy benchmark was comprised of the following components: 22.2% real estate strategy (composed of the Wilshire REIT, NCREIF - National Council of Real Estate Investment Fiduciaries, T-Bills) 20.3% actual return of the timber component, 26.4% actual return of the private equity component, 13.5% Lehman Brothers CCC + 2%, 17.6% GSCI.

## REAL ESTATE

### Market Value
The real estate allocation was $254.1 million, or 4.3% of the total fund as of June 30, 2004.

### Summary of Portfolio
Investments in the real estate allocation may take the form of publicly-traded real estate investment trusts (REITs), equity real estate through closed-end funds, and other investments that exhibit the beneficial risk/return characteristics of real estate. Investments in real estate provide a hedge against inflation. Opportunistic real estate funds should provide returns in excess of those expected from the public equity markets due to the illiquidity of their investments and the inefficiencies in this market. Manager skill is expected to add value to the performance of these private partnerships. As of fiscal year-end, MOSERS had invested in REITs, closed-end opportunistic real estate funds, and a closed-end mezzanine loan fund. A temporary holding account was established in order to invest the assets needed for funding the opportunistic real estate portfolio investments when capital is called for investment. This placeholder account is expected to produce absolute enhanced cash returns from specialized relative value strategies employed by the manager.

### Statistics

| Characteristics | REIT Portfolio | Wilshire REIT Index |
|---|---|---|
| Number of securities | 50 | 50 |
| Average market capitalization | $4.9 B | $4.3B |
| Portfolio yield | 5.3% | 5.4% |
| Portfoio P/E | 28.0 | 31.9 |
| Portfolio Beta vs. Wilshire REIT Index | 1.0 | 1.0 |
| Price/Book ratio | 3.9 | 1.7 |

### Schedule of Investment Advisors

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| Blackstone Bridge Advisors, LP | Absolute return | $ 50,626,600 |
| Blackstone Real Estate Advisors | Active real estate | 16,728,977 |
| Internal Staff | Passive REIT index | 157,540,894 |
| Oaktree Capital Management, LLC | Active real estate | 21,667,683 |
| Trust Company of the West | Mezzanine debt | 7,535,793 |
| Total | | $254,099,947 |

### Statistics
The top table displays the statistical characteristics of the REIT portfolio as of June 30, 2004, with comparisons shown to the Wilshire REIT Index.

### Investment Advisors
During FY04, MOSERS committed assets to two new external investment advisors: TCW - a mezzanine loan fund focused on the oil and gas sector; and Blackstone Real Estate Advisors- an opportunistic real estate fund. The Blackstone Bridge Advisors fund is an absolute return strategy which serves as a placeholder for assets being deployed into the Blackstone Real Estate Advisors fund. The second table above summarizes MOSERS' real estate investment advisors throughout FY04.

### Brokerage Activity
Brokerage activity within the internally-managed REIT portfolio throughout the fiscal year is illustrated in the table at the bottom of this page.

### Soft Dollar Expenditures
There were no soft dollars utilized within the REIT portfolio for the fiscal year ended June 30, 2004.

### Brokerage Activity

| Brokerage Firm | Shares Traded | Dollar Volume of Trades | Commissions | |
|---|---|---|---|---|
| | | | Dollar Amount | Value Per Share |
| Instinet | 2,034,160 | $58,613,745 | $61,025 | $0.03 |

## COMMODITIES

**Market Value**
The commodities allocation was $201.6 million as of June 30, 2004, representing 3.4% of the total fund.

**Summary of Portfolio**
MOSERS gains exposure to commodities through NISA Investment Advisors. The benchmark for this sub-asset class is the Goldman Sachs Commodities Index (GSCI). The commodities portfolio has provided exceptional diversification benefits to MOSERS and continues to provide a hedge against unexpected inflation. Although volatile at times, the low/negative correlation of commodities to traditional asset classes provides protection to the total fund when financial assets experience periods of poor performance.

**Statistics**
The table at top right displays the sector weightings of the commodities portfolio as of June 30, 2004.

**Investment Advisors**
MOSERS has had one manager in the commodities allocation since its inception in 1998. Information on this manager can be found in the second table to the right.

### Statistics

| Sector | Weighting | Largest Component |
|---|---|---|
| Energy | 68.6% | Crude oil (25.5%) |
| Agricultural | 14.7 | Corn (3.9) |
| Industrial metals | 7.4 | Aluminum (3.2) |
| Precious metals | 2.2 | Gold (2.0) |
| Livestock | 7.1 | Live cattle (3.8) |

### Schedule of Investment Advisors

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| NISA Investment Advisors, LLC | Enhanced GSCI | $201,566,972 |

## DISTRESSED DEBT

**Market Value**
The distressed debt allocation was $154.9 million, or 2.7% of the total fund as of June 30, 2004.

**Summary of Portfolio**
Distressed debt investments are expected to provide capital appreciation as funds are used to purchase debt securities to gain a controlling interest in a company at a significant discount to fair value. The inefficiency of the distressed debt market, lack of participation in this sector, and the return premium expected due to the illiquid nature of this strategy, are all factors that lead to the possibility of enhanced returns versus traditional assets. Participation as a limited partner in closed-end funds has been the method of implementation for this strategy. The fund managers typically buy undervalued debt securities and then pursue active strategies to change the credit profile of the company in an attempt to realize a gain on the investment. Over a full market cycle, returns in excess of public debt, and in particular, high yield debt, are expected from distressed debt investments.

### Statistics

| Sector | Weighting |
|---|---|
| Transportation | 15.9% |
| Manufacturing | 14.3 |
| Telecommunications | 12.5 |
| Media/Cable/Broadcasting | 12.4 |
| Consumer Products | 10.1 |

### Schedule of Investment Advisors

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| DDJ Capital Management, LLC | Small-cap; control | $ 31,011,978 |
| MHR Fund Management, LLC | Small-cap; control | 24,509,747 |
| Oaktree Capital Management, LLC | Large/mid-cap; trading/control | 36,199,637 |
| Wayzata Investment Partners, LLC | Mid/small-cap; trading/control | 63,213,156 |
| Total | | $154,934,518 |

Since reported in last year's annual report, the portfolio's exposure to distressed debt securities has been reduced from a significant overweight of 4.6% to a weight of 2.6%. As a result, the allocation has returned to an almost neutral policy weight of 2.5%. Throughout FY03, MOSERS profited handsomely from this tactical overweight due to the poor economic conditions during that period. However, MOSERS' current belief is that with the economy showing signs of improvement, the best opportunities in the distressed debt arena are behind us, at least for this cycle.

**Statistics**
The top table displays the industry weights of the distressed debt portfolio as of June 30, 2004.

**Investment Advisors**
During FY04, MOSERS was invested with four external distressed debt managers through closed-end limited partnerships. As of June 30, 2004, $207 million of the $250 million committed to these managers has been called and invested. Additionally, MOSERS has received approximately $144.2 million in distributions. MOSERS' managers in this space are shown in the second table above.

## TIMBER

**Market Value**
The market value of assets currently being held in the timber allocation is $232 million, or 3.9% of the total fund. It should be noted that MOSERS has committed assets to two timber managers. To date, the managers have not purchased properties for MOSERS' accounts. Instead, the funds in the timber allocation are currently invested in U.S. Treasury securities. These assets will be drawn down for timber investments when the managers identify investment opportunities.

**Summary of Portfolio**
Although there are currently no properties held in the timber portfolio, the dollars committed to timber investments are being held in two U.S. Treasury portfolios. The choice to hold these assets in long-dated Treasuries is a conscious decision to provide the fund some protection against the risk of deflation, which was a meaningful concern throughout most of FY04. The timber portfolio will be built over time through a diversified approach. MOSERS has committed assets to two timber investment management companies to purchase and manage timber in the Northwest and Southeast U.S. A third manager will be given a mandate to purchase timberlands in the southern hemisphere on MOSERS' behalf. The timber allocation will possess geographical, age, tree species, and timber market diversification. These factors have been carefully considered to mitigate risks within the timber portfolio. It is anticipated it will take two to three years to fully invest the funds committed to this sub-asset class. Timber returns over a full market cycle are expected to be similar to those generated by the public equity markets, but should exhibit volatility similar to public debt securities. An allocation to timber also provides a hedge against inflation, additional cash flows, and diversification to the fund when financial assets are experiencing poor performance.

**Schedule of Investment Advisors**

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| Hoisington Investment Management Co. | Active duration treasury securities | $ 99,870,017 |
| Internal Staff | Active duration treasury securities | 132,130,006 |
| Resource Management Service | Southeast U.S. timberland | 0 |
| The Campbell Group | Northwest U.S. timberland | 0 |
| Total | | $232,000,023 |

**Investment Advisors**
MOSERS committed assets to two investment managers during FY04 to purchase and manage timberland properties on the system's behalf. The managers are listed in the table above. However, no timberland investments have been made to date due to the relatively slow process of identifying, evaluating, and purchasing attractive timberland properties. While MOSERS waits for attractive timber opportunities, the funds that have been earmarked for deployment into timber are invested in two U.S. Treasury securities portfolios.

## PRIVATE EQUITY

**Market Value**
The market value of assets currently being held in the private equity allocation is $303.3 million, or 5.2% of the total fund. In FY04, MOSERS made commitments to four private equity managers. However, roughly 70% of the funds in this allocation are still being held in accounts which serve as temporary placeholders until the assets are ready to be committed and deployed. The private equity portfolio is expected to be invested primarily over the next three years, with ongoing investments to be made in order to maintain the target allocation.

Private equity investments may be allocated to three primary strategies: corporate buyouts, venture capital, and special situations/activist equity strategies. Each of these strategies has a different level of risk and expected return. Diversification and enhanced returns are the key benefits of the private equity portfolio. MOSERS anticipates less capital will be committed to venture capital, as it is viewed to have a less attractive risk/return profile than corporate buyouts and special situations/activist equity. The private equity portfolio is expected to produce returns of 3% to 5% in excess of the public equity markets over a full market cycle.

**Schedule of Investment Advisors**

| Investment Advisor | Style | Portfolio Market Value |
|---|---|---|
| Blackstone Alternative Asset Management, LP | Long/short | $110,583,301 |
| Blum Capital Partners, LP | Activist Equity | 30,654,401 |
| Catterton Partners Management Co, LLC | Corp. buyout | 1,740,296 |
| Merrill Lynch Asset Management Group | Enhanced EAFE | 85,063,518 |
| NISA Investment Advisors, LLC | Equity futures | 18,271,762 |
| Relational Investors, LLC | Activist equity | 56,968,506 |
| Totals | | $303,281,784 |

**Investment Advisors**
While 30% of the assets in this sub-asset class have been committed, the remaining 70% resides within temporary placeholder accounts for future private equity investments. The Blackstone long/short fund, Merrill Lynch Enhanced EAFE fund, and NISA equity futures account all serve as temporary placeholders. Information regarding managers in this class is summarized in the table above.

# Securities Lending Summary

**Summary of Program**
In FY04 MOSERS earned net income of $4,036,654 through its securities lending programs. This incremental income contributed 6.8 basis points to MOSERS' total fund and 12.4 basis points to MOSERS' lendable assets. MOSERS lends its domestic equities, international equities, and domestic fixed income to borrowers that manage either an agent lending program or a principal lending program. MOSERS' fixed income and international equities are lent through an agent program while the domestic equities are lent through a principal program. Definitions of these two programs follow.

- *Agent Lending Program*
  In this type of program, a large custodial bank or investment banking institution acts on behalf of the beneficial owner to lend its securities. This type of lending program is essentially a "one-stop" shopping process in which all operational aspects of the program are centered exclusively with one entity. The agent lender is responsible for making the loans to various broker-dealers, investing the cash collateral associated with the loaned securities, marking the loans and collateral to market on a daily basis, and in most cases, indemnifying the lender against the default of a broker-dealer to whom they have loaned securities on behalf of the beneficial owner.

- *Principal Lending Program*
  This type of program differs from an agent lending program in that loans are being made directly to the end user of the securities on an exclusive basis. The elimination of the agent (middle man), carries with it the opportunity for increased revenue, however; this does not come risk free. The primary risk in a principal lending program that an agent program generally avoids is the risk of concentrating a large block of loans with one counterparty and that entity being unable to return the loaned securities due to a coincidental financial hardship or bankruptcy. The implications of counterparty risk and how MOSERS manages it is discussed in the footnotes of the Financial Section of this report starting on page 38.

**Domestic Equity**
MOSERS generated total income from the domestic equity principal lending program of $1,114,144 in FY04. Revenue from this program was $390,008 less than FY03 stemming from a decrease in utilization of lendable assets, decreased collateral reinvestment income, and a change in contract terms regarding the principal guarantee. Lehman Brothers is the exclusive borrower of MOSERS' securities for this program.

The top table on page 95 highlights statistics for the last three fiscal years relating to the domestic equity securities lending program.

**International Equity**
MOSERS generated total income from the international equity securities lending program of $446,880 in FY04. A $298,105 revenue decrease from FY03 is credited to the movement of a piece of the international equity lendable base into a commingled fund. Credit Suisse First Boston (CSFB) manages this program in an agent capacity.

The middle table on page 95 contains the international equity securities lending program statistics from FY02 through FY04.

**Domestic Fixed Income**
MOSERS generated total income from the domestic fixed income securities lending program of $2,475,630 in FY04. Income from this program increased due to the addition of a treasury portfolio (attractive from a lending standpoint) to the lendable fixed income assets. CSFB manages this program in an agent capacity.

The bottom table on page 95 presents the statistics for the domestic fixed income securities lending program for FY02 through FY04.

## Domestic Equities

| | Average Lendable | Average on Loan | Average Utilization | Return Added to Lendable Domestic Equities (basis points) | Net Income |
|---|---|---|---|---|---|
| FY 2004 | $1,552,186,713 | $176,626,818 | 11.4% | 7.2 | $1,114,144 |
| FY 2003 | 1,420,413,446 | 234,776,497 | 16.5 | 10.6 | 1,504,152 |
| FY 2002 | 2,347,223,937 | 254,035,429 | 10.8 | 8.6 | 2,027,903 |

## International Equity

| | Average Lendable | Average on Loan | Average Utilization | Return Added to Lendable International Equities (basis points) | Net Income |
|---|---|---|---|---|---|
| FY 2004 | $462,783,570 | $53,655,836 | 11.6% | 9.7 | $446,880 |
| FY 2003 | 544,976,709 | 36,820,686 | 6.8 | 13.7 | 744,985 |
| FY 2002 | 728,081,371 | 70,020,289 | 9.6 | 15.5 | 1,130,928 |

## Domestic Fixed Equity

| | Average Lendable | Average on Loan | Average Utilization | Return Added to Lendable Domestic Fixed Income (basis points) | Net Income |
|---|---|---|---|---|---|
| FY 2004 | $1,231,730,491 | $1,043,891,521 | 84.7% | 20.1 | $2,475,630 |
| FY 2003 | 969,156,825 | 757,537,477 | 78.2 | 17.6 | 1,707,400 |
| FY 2002 | 899,565,271 | 720,912,307 | 80.1 | 19.5 | 1,750,764 |

# An Epic Tale

The expedition struggled around the Great Falls of the Missouri, searched for a pass over the Continental Divide, and was stunned to not find a water passage direct from present day Idaho to the ocean. Instead, the party labored in deep snow over the Lolo Trail, crossing the border of present day Montana into Idaho, then traveled on the Snake River into present day Washington before finally reaching the Columbia River. By the time Lewis and Clark reached the Pacific Ocean in November 1805 and built Fort Clatsop, they had a much clearer sense of the continent's geographic complexity.

The return journey to St. Louis held its own unique dangers and accomplishments. With several important exploration tasks still planned, Clark led one party on a reconnaissance of the Yellowstone River, while Lewis took a small detachment into present day Montana. In August, the groups reunited on the Missouri River near the mouth of the Yellowstone and continued homeward bound towards St. Louis.

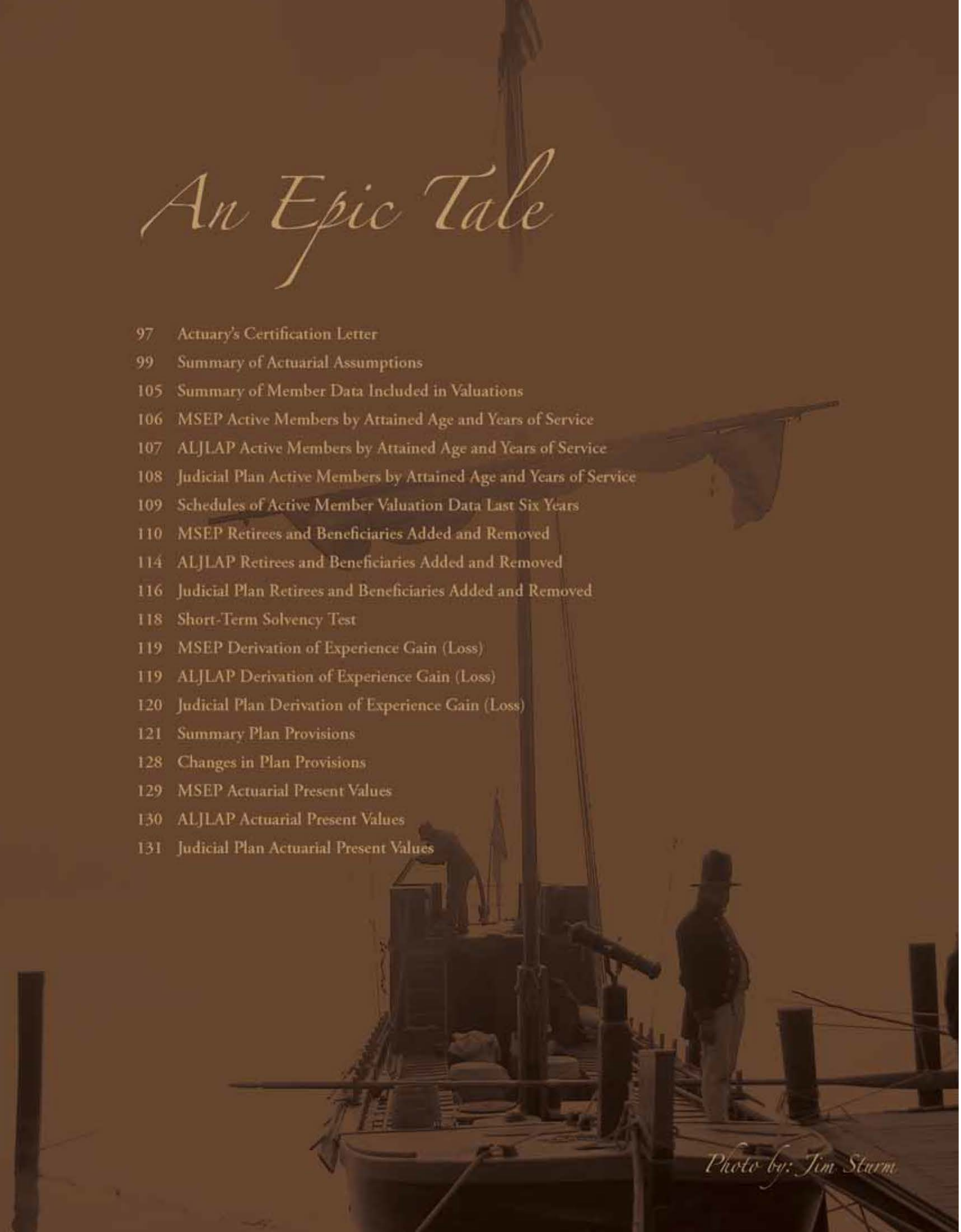


Photo by: Jim Sturm

# An Epic Tale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# Actuary's Certification Letter

GRS

GABRIEL, ROEDER, SMITH & COMPANY

Consultants & Actuaries

One Towne Square • Suite 800 • Southfield, Michigan 48076 • 248-799-9000 • 800-521-0498 • fax 248-799-9020

September 29, 2004

The Board of Trustees
Missouri State Employees' Retirement System
907 Wildwood Drive
Jefferson City, Missouri 65109

Dear Board Members:

The basic financial objective of the Missouri State Employees' Retirement System (MOSERS) is to establish and receive contributions which:

(1) when expressed in terms of percents of active member payroll will remain approximately level from generation to generation of Missouri citizens, and which
(2) when combined with present assets and future investment return will be sufficient to meet the present and future financial obligations of MOSERS.

In order to measure progress toward this fundamental objective, MOSERS has annual actuarial valuations performed. The valuations (i) measure present financial position, and (ii) establish contribution rates that provide for the current cost and level percent of payroll amortization of unfunded actuarial accrued liabilities over a reasonable period. The latest completed actuarial valuations were based upon data and assumptions as of June 30, 2004. These valuations indicate that the contribution rates for the fiscal year ending June 30, 2006, adopted by the board of trustees for the benefits scheduled to be in effect on July 1, 2004, meet the basic financial objective. These contribution rates are 12.59% of payroll for 55,914 general state employees, 21.79% of payroll for 57 administrative law judges, and 55.76% of payroll for 391 judges other than administrative law judges.

The actuarial valuations are based upon financial and participant data, which is prepared by retirement system staff, assumptions regarding future rates of investment return and inflation, and assumptions regarding rates of retirement, turnover, death, and disability among MOSERS' members and their beneficiaries. The data is reviewed by us for internal and year-to-year consistency as well as general reasonableness prior to its use in the actuarial valuations. It is also summarized and tabulated for the purpose of analyzing trends. The demographic assumptions were adopted by the board of trustees in January 2004 based upon recommendations made in an experience study covering the period from 1999-2003.

The economic assumptions were adopted by the board of trustees in September 2001 and reaffirmed in January 2004. Assets are valued according to a method that fully recognizes expected investment return and averages unanticipated market return over a five-year period. The assumptions and methods utilized in this valuation, in our opinion, meet the parameters established by Governmental Accounting Standards Board Statement No. 25.

The current benefit structure is outlined in the Actuarial Section. The changes made since the previous valuation are highlighted on page 128. We provided the information used in the supporting schedules in the Actuarial Section and the *Schedules of Funding Progress* in the Financial Section, as well as the employer contribution rates shown in the *Schedule of Employer Contributions* in the Financial Section.

**Based upon the valuation results, it is our opinion that the Missouri State Employees' Retirement System continues in sound financial condition in accordance with actuarial principles of level percent of payroll financing.**

Respectfully submitted,

Norman L. Jones, F.S.A.
Senior Consultant & Actuary

Brad L. Armstrong, A.S.A.
Senior Consultant & Actuary

# Summary of Actuarial Assumptions

June 30, 2004

**Economic Assumptions**
The investment return rate used in the valuations was 8.5% per year, compounded annually (net after investment expenses). This assumption is used to account for the fact that equal amounts of money payable at different points in time in the future do not have the same value presently.

Pay increase assumptions for individual active members are shown for sample ages on page 100. Part of the assumption for each age is for merit and/or seniority increase, and the other 4% recognizes wage inflation. This assumption is used to project a member's current salary to the salary upon which benefits will be based.

The active member payroll is assumed to increase 4% annually, which is the portion of the individual pay increase assumptions attributable to inflation.

The annual COLA is assumed to be 4% per year on a compounded basis when a minimum COLA of 4% is in effect and 2.8% per year on a compounded basis when no minimum COLA is in effect.

The number of active members in the MSEP is assumed to remain constant although certain new hires on or after July 1, 2002, will participate in the College and University Retirement Plan (CURP). The number of active members in the ALJLAP and Judicial Plan is assumed to continue at the present number. Active and retired member data is reported as of May 31, 2004. It is assumed for valuation purposes that there is no turnover among members and no new entrants during the month of June.

**Noneconomic Assumptions**
The mortality table for post-retirement mortality used in evaluating allowances to be paid, was the 1971 Group Annuity Mortality Table projected to the year 2000 with a 1-year age setback for men and a 7-year age setback for women. Related values are shown on page 101. This assumption is used to measure the probabilities of each benefit payment being made after retirement.

The probabilities of age and service retirement are shown on pages 101-103. The first two years of eligibility, if prior to age 70, were halved due to the expected emerging effect of the BackDROP. It was assumed that each member will be granted one-half year of service credit for unused leave upon retirement and military service purchases.

The probabilities of withdrawal from service, death-in-service, and disability are shown for sample ages on page 100. For disability retirement, impaired longevity was recognized by use of special mortality tables.

The entry-age normal actuarial cost method of valuation was used in determining liabilities and normal cost. The normal cost was based on the benefit provisions affecting new employees (MSEP 2000). Differences in the past between assumed experience and actual experience (actuarial gains and losses) become part of actuarial accrued liabilities. Unfunded actuarial accrued liabilities are amortized to produce payments (principal and interest), which are a level percent of payroll contributions.

Employer contribution dollars were assumed to be paid in equal installments throughout the employer fiscal year.

The asset valuation method fully recognizes expected investment return and averages unanticipated market return over a five-year period.

The data about persons now covered and about present assets was furnished by the system's administrative staff. Although examined for general reasonableness, the data was not audited by the actuary.

It is assumed that among active members, 80% are married at retirement, 70% of those dying in active service are married, and men are three years older than their spouses.

The liabilities for active members hired on or after July 1, 2000, were based on MSEP 2000 benefits. The liabilities for active members hired before July 1, 2000, were based on MSEP 2000 benefits for male general employees with an age at hire of 35 years or less, for female general employees, for contract employees, for elected officials, and for general assembly members. All others were based on MSEP benefits. The BackDROP was only explicitly valued for those assumed to receive MSEP 2000 benefits.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

# Summary of Actuarial Assumptions

## Separations From Active Employment Before Service Retirement and Individual Pay Increase Assumptions

June 30, 2004

**MSEP**

| | | Percent of Active Members Separating Within the Next Year | | | | | | Pay Increase Assumptions for an Individual Employee | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Withdrawal | | Death* | | Disability | | | | |
| Sample Ages | Years of Service | Men | Women | Men | Women | Men | Women | Merit and Seniority** | Base (Economy) | Increase Next Year |
| | 0 | 23.8% | 24.7% | | | | | | | |
| | 1 | 16.5 | 17.2 | | | | | | | |
| | 2 | 13.4 | 13.5 | | | | | | | |
| | 3 | 11.9 | 10.7 | | | | | | | |
| | 4 | 12.0 | 10.7 | | | | | | | |
| 20 | +5 | 12.0 | 11.0 | .04% | .03% | .16% | .18% | 2.7% | 4.0% | 6.7% |
| 25 | | 12.0 | 11.0 | .05 | .04 | .16 | .18 | 2.6 | 4.0 | 6.6 |
| 30 | | 8.8 | 9.9 | .06 | .04 | .16 | .18 | 2.2 | 4.0 | 6.2 |
| 35 | | 6.2 | 6.8 | .08 | .06 | .21 | .19 | 1.9 | 4.0 | 5.9 |
| 40 | | 4.6 | 4.9 | .12 | .08 | .26 | .32 | 1.4 | 4.0 | 5.4 |
| 45 | | 3.5 | 4.3 | .19 | .11 | .34 | .37 | 1.2 | 4.0 | 5.2 |
| 50 | | 2.8 | 3.6 | .35 | .17 | .49 | .57 | 0.7 | 4.0 | 4.7 |
| 55 | | 2.4 | 2.9 | .59 | .31 | 1.07 | .89 | 0.7 | 4.0 | 4.7 |
| 60 | | 2.4 | 2.9 | .90 | .54 | 1.50 | 1.50 | 0.0 | 4.0 | 4.0 |
| 65 | | 2.4 | 2.9 | 1.44 | .83 | 1.60 | 0.70 | 0.0 | 4.0 | 4.0 |

* 2% of the deaths in active service are assumed to be duty-related.
** Does not apply to members of the general assembly.

**ALJLAP**

| | Percent of Active Members Separating Within the Next Year | | | | | | Pay Increase Assumptions for an Individual Employee | | |
|---|---|---|---|---|---|---|---|---|---|
| | Withdrawal | | Death | | Disability | | | | |
| Sample Ages | Men | Women | Men | Women | Men | Women | Merit and Seniority | Base (Economy) | Increase Next Year |
| 25 | 6.2% | 4.5% | .05% | .04% | .02% | .02% | 1.6% | 4.0% | 5.6% |
| 30 | 5.5 | 3.7 | .06 | .04 | .03 | .03 | 1.2 | 4.0 | 5.2 |
| 35 | 3.8 | 2.6 | .08 | .06 | .03 | .07 | 0.9 | 4.0 | 4.9 |
| 40 | 2.7 | 2.1 | .12 | .08 | .04 | .11 | 0.4 | 4.0 | 4.4 |
| 45 | 2.1 | 1.9 | .19 | .11 | .09 | .17 | 0.3 | 4.0 | 4.3 |
| 50 | 2.1 | 1.7 | .35 | .17 | .12 | .35 | 0.2 | 4.0 | 4.2 |
| 55 | 2.1 | 1.2 | .59 | .31 | .23 | .49 | 0.2 | 4.0 | 4.2 |
| 60 | 1.7 | 0.6 | .90 | .54 | .33 | .53 | 0.0 | 4.0 | 4.0 |
| 65 | 1.2 | 0.4 | 1.44 | .83 | .00 | .00 | 0.0 | 4.0 | 4.0 |

# Summary of Actuarial Assumptions

## Separations From Active Employment Before Service Retirement and Individual Pay Increase Assumptions

June 30, 2004

**Judicial Plan**

| Sample Ages | Percent of Active Members Separating Within the Next Year: Withdrawal Men | Withdrawal Women | Death Men | Death Women | Disability Men | Disability Women | Pay Increase Assumptions for an Individual Employee: Merit and Seniority | Base (Economy) | Increase Next Year |
|---|---|---|---|---|---|---|---|---|---|
| 25 | 6.2% | 4.5% | .05% | .04% | .02% | .02% | 1.6% | 4.0% | 5.6% |
| 30 | 5.5 | 3.7 | .06 | .04 | .03 | .03 | 1.2 | 4.0 | 5.2 |
| 35 | 3.8 | 2.6 | .08 | .06 | .03 | .07 | 0.9 | 4.0 | 4.9 |
| 40 | 2.7 | 2.1 | .12 | .08 | .04 | .11 | 0.4 | 4.0 | 4.4 |
| 45 | 2.1 | 1.9 | .19 | .11 | .09 | .17 | 0.3 | 4.0 | 4.3 |
| 50 | 2.1 | 1.7 | .35 | .17 | .12 | .35 | 0.2 | 4.0 | 4.2 |
| 55 | 2.1 | 1.2 | .59 | .31 | .23 | .49 | 0.2 | 4.0 | 4.2 |
| 60 | 1.7 | 0.6 | .90 | .54 | .33 | .53 | 0.0 | 4.0 | 4.0 |
| 65 | 1.2 | 0.4 | 1.44 | .83 | .00 | .00 | 0.0 | 4.0 | 4.0 |

# Summary of Actuarial Assumptions

## Single Life Retirement Values

June 30, 2004

**All Plans**

| Sample Attained Ages | Present Value of $1/Month the First Year Increasing 4%/2.8% Yearly: Service Men | Service Women | Disability Men | Disability Women | Future Life Expectancy (Years): Service Men | Service Women | Disability Men | Disability Women |
|---|---|---|---|---|---|---|---|---|
| 40 | $ 202.23 | $ 212.07 | $ 135.46 | $ 156.68 | 38.46 | 44.22 | 19.70 | 26.02 |
| 45 | 191.81 | 204.06 | 126.32 | 150.16 | 33.73 | 39.41 | 17.50 | 23.70 |
| 50 | 179.47 | 194.06 | 116.10 | 142.75 | 29.17 | 34.67 | 15.35 | 21.39 |
| 55 | 165.25 | 182.08 | 106.06 | 135.11 | 24.82 | 30.06 | 13.43 | 19.18 |
| 60 | 148.90 | 168.25 | 97.62 | 126.74 | 20.70 | 25.67 | 11.87 | 17.01 |
| 65 | 130.43 | 152.36 | 90.66 | 117.09 | 16.82 | 21.50 | 10.56 | 14.82 |
| 70 | 110.79 | 134.27 | 82.12 | 105.05 | 13.32 | 17.57 | 9.13 | 12.50 |
| 75 | 91.75 | 114.73 | 70.79 | 89.33 | 10.36 | 13.99 | 7.49 | 10.00 |
| 80 | 73.37 | 95.50 | 56.17 | 71.93 | 7.83 | 10.91 | 5.66 | 7.62 |
| 85 | 57.86 | 76.89 | 42.26 | 56.17 | 5.89 | 8.29 | 4.08 | 5.66 |

# Summary of Actuarial Assumptions

## Percent of Eligible Active Members Retiring Next Year

June 30, 2004

**MSEP**

| Retirement | Year of Eligibility | | |
|---|---|---|---|
| Ages | 1st Year | 2nd Year | 3rd Year |
| 48 | 20.0% | 10.0% | 8.0% |
| 49 | 20.0 | 10.0 | 8.0 |
| 50 | 20.0 | 10.0 | 8.0 |
| 51 | 20.0 | 10.0 | 8.0 |
| 52 | 20.0 | 10.0 | 8.0 |
| 53 | 20.0 | 10.0 | 8.0 |
| 54 | 20.0 | 10.0 | 8.0 |
| 55 | 25.0 | 10.0 | 15.0 |
| 56 | 20.0 | 10.0 | 15.0 |
| 57 | 20.0 | 10.0 | 15.0 |
| 58 | 20.0 | 10.0 | 15.0 |
| 59 | 20.0 | 10.0 | 15.0 |
| 60 | 25.0 | 10.0 | 15.0 |
| 61 | 20.0 | 10.0 | 15.0 |
| 62 | 30.0 | 15.0 | 35.0 |
| 63 | 20.0 | 12.0 | 20.0 |
| 64 | 20.0 | 12.0 | 20.0 |
| 65 | 30.0 | 15.0 | 40.0 |
| 66 | 20.0 | 12.0 | 25.0 |
| 67 | 20.0 | 12.0 | 25.0 |
| 68 | 20.0 | 12.0 | 25.0 |
| 69 | 20.0 | 12.0 | 25.0 |
| 70 | 20.0 | 12.0 | 25.0 |
| 71 | 20.0 | 12.0 | 25.0 |
| 72 | 20.0 | 12.0 | 25.0 |
| 73 | 20.0 | 12.0 | 25.0 |
| 74 | 20.0 | 12.0 | 25.0 |
| 75 & over | 20.0 | 12.0 | 100.00 |

Early retirement rates were assumed to be 5.0% from age 57-61.

# Summary of Actuarial Assumptions

## Percent of Eligible Active Members Retiring Next Year

June 30, 2004

**ALJLAP**

| **Retirement Ages** | **Percent Men** | **Women** |
|---|---|---|
| 55 | 5.0% | 8.0% |
| 56 | 5.0 | 8.0 |
| 57 | 5.0 | 8.0 |
| 58 | 5.0 | 8.0 |
| 59 | 5.0 | 8.0 |
| 60 | 15.0 | 25.0 |
| 61 | 10.0 | 15.0 |
| 62 | 15.0 | 25.0 |
| 63 | 10.0 | 15.0 |
| 64 | 10.0 | 25.0 |
| 65 | 25.0 | 55.0 |
| 66 | 20.0 | 35.0 |
| 67 | 20.0 | 25.0 |
| 68 | 20.0 | 25.0 |
| 69 | 30.0 | 60.0 |
| 70 | 30.0 | 60.0 |
| 71 | 30.0 | 60.0 |
| 72 | 30.0 | 60.0 |
| 73 | 30.0 | 60.0 |
| 74 | 30.0 | 60.0 |
| 75 & over | 100.0 | 100.0 |

**Judicial Plan**

| **Retirement Ages** | **Percent Men** | **Women** |
|---|---|---|
| 55 | 5.0% | 8.0% |
| 56 | 5.0 | 8.0 |
| 57 | 5.0 | 8.0 |
| 58 | 5.0 | 8.0 |
| 59 | 5.0 | 8.0 |
| 60 | 15.0 | 15.0 |
| 61 | 10.0 | 10.0 |
| 62 | 15.0 | 15.0 |
| 63 | 10.0 | 10.0 |
| 64 | 10.0 | 10.0 |
| 65 | 25.0 | 40.0 |
| 66 | 20.0 | 25.0 |
| 67 | 20.0 | 25.0 |
| 68 | 20.0 | 25.0 |
| 69 | 30.0 | 50.0 |
| 70 | 100.0 | 100.0 |

# Summary of Actuarial Assumptions

## Miscellaneous and Technical Assumptions

June 30, 2004

**Pay Increase Timing**
Middle of fiscal year.

**Decrement Timing**
Decrements of all types are assumed to occur mid-year.

**Eligibility Testing**
Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

**Benefit Service**
Exact fractional service is used to determine the amount of benefit payable.

**Decrement Relativity**
Decrement rates are used directly from the experience study without adjustments for multiple decrement table effects.

**Decrement Operation**
Disability and mortality decrements do not operate during the first five years of service. Disability and withdrawal do not operate during normal retirement eligibility.

**Normal Form of Benefit**
The assumed normal form of benefit is the straight life form for the MSEP 2000 with 50% continuing to an eligible surviving spouse for the MSEP. No adjustment has been made for post-retirement option election changes.

**Loads**
No loads were used.

**Incidence of Contributions**
Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in the report and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

# Summary of Member Data Included in Valuations

## Pension Trust Funds

## June 30, 2004

### Active Members

| Valuation Group | Number | Payroll | Group Averages Salary | Age (Yrs.) | Service (Yrs.) |
|---|---|---|---|---|---|
| **Missouri State Employees' Plan** | | | | | |
| Regular state employees | 51,551 | $1,533,940,962 | 29,756 | 43.6 | 9.7 |
| Elected officials | 6 | 590,966 | 98,494 | 47.1 | 7.1 |
| Legislative clerks | 79 | 2,037,423 | 25,790 | 54.9 | 13.8 |
| Legislators | 196 | 6,157,275 | 31,415 | 49.7 | 3.8 |
| Uniformed water patrol | 84 | 3,303,050 | 39,322 | 38.7 | 13.2 |
| Conservation Department | 1,487 | 54,629,009 | 36,738 | 42.5 | 12.7 |
| School-term salaried employees | 2,511 | 136,795,769 | 54,479 | 51.6 | 15.5 |
| Total MSEP group | 55,914 | 1,737,454,454 | 31,074 | 44.0 | 10.0 |
| **Administrative Law Judges and Legal Advisors' Plan** | 57 | 4,655,340 | 81,673 | 48.8 | 10.2 |
| **Judicial Plan** | 391 | 39,878,499 | 101,991 | 53.6 | 11.4 |

### Retired Members

| Type of Benefit Payment | Number | Annual Benefits | Group Averages Benefit | Age (Yrs.) |
|---|---|---|---|---|
| **Missouri State Employees' Plan** | | | | |
| Retirement | 21,824 | $301,780,727 | 13,828 | 69.3 |
| Disability | 25 | 98,544 | 3,942 | 57.7 |
| Survivor of active member | 1,206 | 8,880,058 | 7,363 | 58.9 |
| Survivor of retired member | 1,702 | 13,867,729 | 8,148 | 73.3 |
| Total MSEP group | 24,757 | 324,627,058 | 13,113 | 69.0 |
| **Administrative Law Judges and Legal Advisors' Plan** | 25 | 910,409 | 36,416 | 73.2 |
| **Judicial Plan** | 397 | 18,005,774 | 45,355 | 75.7 |

### Others

| Group | Terminated Vested | Leave of Absence | Long-Term Disability |
|---|---|---|---|
| **Missouri State Employees' Plan** | 13,796 | 511 | 1,055 |
| **Administrative Law Judges and Legal Advisors' Plan** | 29 | 0 | 0 |
| **Judicial Plan** | 73 | 0 | 0 |

# Active Members by Attained Age and Years of Service

June 30, 2004

**MSEP**

| | Years of Service to Valuation Date | | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| **Attained Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30 Plus** | **No.** | **Valuation Payroll** |
| 15-19 | 73 | | | | | | | 73 | $ 1,188,096 |
| 20-24 | 1,836 | 18 | | | | | | 1,854 | 38,551,293 |
| 25-29 | 3,996 | 837 | 12 | | | | | 4,845 | 122,552,267 |
| 30-34 | 3,096 | 2,563 | 445 | 19 | | | | 6,123 | 172,216,499 |
| 35-39 | 2,407 | 2,161 | 1,495 | 511 | 25 | | | 6,599 | 197,214,229 |
| 40-44 | 2,446 | 2,035 | 1,359 | 1,468 | 645 | 78 | | 8,031 | 249,856,953 |
| 45-49 | 2,275 | 1,974 | 1,350 | 1,426 | 1,072 | 878 | 52 | 9,027 | 291,970,400 |
| 50-54 | 1,916 | 1,693 | 1,354 | 1,424 | 1,010 | 1,209 | 353 | 8,959 | 304,685,907 |
| 55-59 | 1,419 | 1,314 | 1,136 | 1,113 | 723 | 512 | 302 | 6,519 | 221,664,790 |
| 60 | 168 | 144 | 133 | 166 | 68 | 43 | 45 | 767 | 26,173,010 |
| 61 | 154 | 182 | 133 | 139 | 66 | 49 | 46 | 769 | 26,684,555 |
| 62 | 142 | 138 | 101 | 115 | 47 | 29 | 41 | 613 | 21,922,337 |
| 63 | 73 | 111 | 65 | 71 | 28 | 26 | 40 | 414 | 14,546,606 |
| 64 | 68 | 68 | 60 | 55 | 25 | 16 | 21 | 313 | 11,175,093 |
| 65 | 44 | 58 | 39 | 36 | 14 | 12 | 40 | 243 | 9,245,920 |
| 66 | 38 | 35 | 39 | 26 | 15 | 17 | 27 | 197 | 7,772,932 |
| 67 | 16 | 36 | 23 | 17 | 11 | 9 | 22 | 134 | 5,138,982 |
| 68 | 19 | 23 | 16 | 21 | 9 | 4 | 12 | 104 | 3,785,737 |
| 69 | 13 | 15 | 17 | 19 | 9 | 5 | 11 | 89 | 3,189,742 |
| 70 & Over | 51 | 41 | 41 | 47 | 21 | 17 | 23 | 241 | 7,919,106 |
| Totals | 20,250 | 13,446 | 7,818 | 6,673 | 3,788 | 2,904 | 1,035 | 55,914 | $1,737,454,454 |

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

**Group Averages:**

| | |
|---|---|
| Age | 44.0 years |
| Service | 10.0 years |
| Annual Pay | $31,074 |

# Active Members by Attained Age and Years of Service

June 30, 2004

**ALJLAP**

| | Years of Service to Valuation Date | | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| **Attained Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30 Plus** | **No.** | **Valuation Payroll** |
| 30-34 | 1 | | | | | | | 1 | $ 76,800 |
| 35-39 | 8 | 2 | | | | | | 10 | 835,629 |
| 40-44 | 2 | 1 | 7 | 1 | | | | 11 | 842,934 |
| 45-49 | 4 | 4 | 4 | | | | | 12 | 972,273 |
| 50-54 | 1 | 1 | 1 | 5 | | | | 8 | 708,599 |
| 55-59 | 1 | 1 | 2 | 1 | 1 | | | 6 | 511,829 |
| 60 | 1 | | | | 1 | | | 2 | 153,600 |
| 61 | | 1 | | | | 1 | | 2 | 157,268 |
| 62 | | | 1 | | | | | 1 | 86,400 |
| 65 | 1 | | | | | | | 1 | 70,008 |
| 67 | | | | | | 1 | | 1 | 76,800 |
| 69 | 1 | | | | | | | 1 | 86,400 |
| 70 & Over | | | | | | | 1 | 1 | 76,800 |
| Totals | 20 | 10 | 15 | 7 | 2 | 2 | 1 | 57 | $4,655,340 |

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

**Group Averages:**

| | |
|---|---|
| Age | 48.8 years |
| Service | 10.2 years |
| Annual Pay | $81,673 |

# Active Members by Attained Age and Years of Service

June 30, 2004

**Judicial Plan**

| | Years of Service to Valuation Date | | | | | | | Totals | |
|---|---|---|---|---|---|---|---|---|---|
| **Attained Age** | **0-4** | **5-9** | **10-14** | **15-19** | **20-24** | **25-29** | **30 Plus** | **No.** | **Valuation Payroll** |
| 30-34 | 1 | | | | | | | 1 | $96,000 |
| 35-39 | 12 | 4 | | | | | | 16 | 1,536,000 |
| 40-44 | 16 | 13 | 2 | 1 | | | | 32 | 3,130,772 |
| 45-49 | 19 | 23 | 6 | 3 | 1 | | | 52 | 5,283,644 |
| 50-54 | 28 | 23 | 23 | 10 | 6 | 8 | | 98 | 10,071,494 |
| 55-59 | 17 | 30 | 23 | 18 | 10 | 16 | 1 | 115 | 11,777,596 |
| 60 | 1 | 3 | 5 | 5 | | | | 14 | 1,404,000 |
| 61 | 1 | 2 | 1 | | 1 | 1 | | 6 | 612,000 |
| 62 | 1 | 4 | 2 | 4 | 2 | | | 13 | 1,333,998 |
| 63 | 1 | 3 | 3 | 2 | 4 | 1 | | 14 | 1,458,999 |
| 64 | | 3 | 1 | | 1 | 2 | 2 | 9 | 942,999 |
| 65 | 1 | | 1 | | 1 | 1 | 2 | 6 | 625,999 |
| 66 | | 1 | 2 | 2 | | | | 5 | 534,999 |
| 67 | 1 | | | 1 | 1 | | 1 | 4 | 427,000 |
| 68 | | | 1 | | | 1 | 1 | 3 | 318,999 |
| 69 | | | 1 | | | 1 | | 2 | 216,000 |
| 70 & Over | | | | | | 1 | | 1 | 108,000 |
| Totals | 99 | 109 | 71 | 46 | 27 | 32 | 7 | 391 | $39,878,499 |

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

**Group Averages:**

| | |
|---|---|
| Age | 53.6 years |
| Service | 11.4 years |
| Annual Pay | $101,991 |

# Schedules of Active Member Valuation Data

Six Years Ended June 30, 2004

## MSEP

| Valuation Date | Number | Annual Payroll | Annual Average Pay | Percentage of Increase in Average Pay |
|---|---|---|---|---|
| | Schedule of Active Member Valuation Data | | | |
| June 30, 1999 | 56,158 | 1,564,551,532 | 27,860 | 4.10 |
| June 30, 2000 | 57,774 | 1,683,697,080 | 29,143 | 4.61 |
| June 30, 2001 | 58,431 | 1,758,190,268 | 30,090 | 3.25 |
| June 30, 2002 | 58,616 | 1,773,283,484 | 30,253 | 0.54 |
| June 30, 2003 | 57,558 | 1,739,895,364 | 30,229 | (0.08) |
| June 30, 2004 | 55,914 | 1,737,454,454 | 31,074 | 2.80 |

## ALJLAP

| Valuation Date | Number | Annual Payroll | Annual Average Pay | Percentage of Increase in Average Pay |
|---|---|---|---|---|
| | Schedule of Active Member Valuation Data | | | |
| June 30, 1999 | 47 | 3,488,698 | 74,228 | 11.09 |
| June 30, 2000 | 52 | 4,072,888 | 78,325 | 5.52 |
| June 30, 2001 | 57 | 4,661,020 | 81,772 | 4.40 |
| June 30, 2002 | 58 | 4,779,504 | 82,405 | 0.77 |
| June 30, 2003 | 57 | 4,657,896 | 81,717 | (0.83) |
| June 30, 2004 | 57 | 4,655,340 | 81,673 | (0.05) |

## Judicial Plan

| Valuation Date | Number | Annual Payroll | Annual Average Pay | Percentage of Increase in Average Pay |
|---|---|---|---|---|
| | Schedule of Active Member Valuation Data | | | |
| June 30, 1999 | 366 | 34,162,013 | 93,339 | 5.00 |
| June 30, 2000 | 375 | 37,107,487 | 98,953 | 6.01 |
| June 30, 2001 | 381 | 38,687,793 | 101,543 | 2.62 |
| June 30, 2002 | 392 | 40,068,744 | 102,216 | 0.66 |
| June 30, 2003 | 392 | 40,052,952 | 102,176 | (0.04) |
| June 30, 2004 | 391 | 39,878,499 | 101,991 | (0.18) |

# Retirees and Beneficiaries Added and Removed

Six Years Ended June 30, 2004

**MSEP**

**Added to Rolls**

| Fiscal Year Ended | Classification | Benefit Type | Number | Annual Allowances |
|---|---|---|---|---|
| June 30, 1999 | General Employee | Retirement | 1,282 | $ 18,566,542 |
| | | Survivor Of Active | 95 | 773,822 |
| | | Survivor of Retired | 152 | 1,081,059 |
| | | Disability | 0 | 4,558 |
| | | Occupational Disability | 0 | 0 |
| | Lincoln University - Vested | Retirement | 1 | 1,051 |
| | | Survivor Of Active | 0 | (262) |
| | Legislators | Retirement | 10 | 257,072 |
| | | Survivor Of Active | 2 | 26,662 |
| | | Survivor of Retired | 5 | 39,656 |
| | Elected Officials | Retirement | 1 | 49,578 |
| | | Survivor Of Active | 0 | 0 |
| | | Survivor of Retired | 0 | 861 |
| June 30, 2000 | General Employee | Retirement | 1,337 | 20,272,214 |
| | | Survivor Of Active | 86 | 1,020,432 |
| | | Survivor of Retired | 416 | 2,481,786 |
| | | Disability | 1 | 8,081 |
| | | Occupational Disability | 0 | 0 |
| | Lincoln University -Vested | Retirement | 1 | 5,860 |
| | | Survivor Of Active | 0 | 0 |
| | Legislators | Retirement | 8 | 204,076 |
| | | Survivor Of Active | 0 | 2,157 |
| | | Survivor of Retired | 3 | 36,026 |
| | Elected Officials | Retirement | 0 | 6,821 |
| | | Survivor Of Active | 0 | 0 |
| | | Survivor of Retired | 0 | 895 |
| June 30, 2001 | General Employee | Retirement | 2,580 | 55,234,780 |
| | | Survivor Of Active | 84 | 814,517 |
| | | Survivor of Retired | 197 | 1,832,029 |
| | | Disability | 0 | 3,518 |
| | | Occupational Disability | 0 | 0 |
| | Lincoln University - Vested | Retirement | 1 | 1,841 |
| | | Survivor Of Active | 0 | 0 |
| | Legislators | Retirement | 14 | 436,356 |
| | | Survivor Of Active | 0 | 2,468 |
| | | Survivor of Retired | 7 | 89,399 |
| | Elected Officials | Retirement | 6 | 230,136 |
| | | Survivor Of Active | 1 | 56,938 |
| | | Survivor of Retired | 0 | 931 |

| Removed From Rolls | | Rolls at End of Year | | | | |
|---|---|---|---|---|---|---|
| Number | Annual Allowances | Number | Annual Allowances | Percentage Increase in Annual Allowances | Average Annual Allowance | Percentage Increase in Average Annual Allowance |
| 637 | $ 4,686,352 | 15,177 | $ 145,836,606 | 10.52% | $ 9,609 | 5.83% |
| 21 | 47,199 | 934 | 5,006,254 | 16.98 | 5,360 | 7.72 |
| 37 | 193,063 | 815 | 5,428,136 | 19.56 | 6,660 | 2.68 |
| 4 | 21,045 | 59 | 225,412 | (6.82) | 3,821 | (0.49) |
| 0 | 0 | 1 | 17,448 | 0.00 | 17,448 | 0.00 |
| 1 | 4,327 | 6 | 31,143 | (9.52) | 5,191 | (9.52) |
| 0 | 0 | 1 | 2,624 | (9.08) | 2,624 | (9.08) |
| 7 | 105,277 | 161 | 2,838,771 | 5.65 | 17,632 | 3.68 |
| 0 | 0 | 8 | 67,879 | 64.69 | 8,485 | 23.51 |
| 6 | 60,921 | 27 | 197,388 | (9.73) | 7,311 | (6.38) |
| 0 | 0 | 3 | 136,446 | 57.07 | 45,482 | 4.72 |
| 0 | 0 | 0 | 0 | 0.00 | 0 | 0.00 |
| 0 | 0 | 1 | 22,373 | 4.00 | 22,373 | 4.00 |
| 649 | 5,324,814 | 15,865 | 160,784,006 | 10.25 | 10,135 | 5.47 |
| 37 | 110,049 | 983 | 5,916,637 | 18.18 | 6,019 | 12.29 |
| 47 | 294,927 | 1,184 | 7,614,995 | 40.29 | 6,432 | (3.42) |
| 8 | 43,141 | 52 | 190,352 | (15.55) | 3,661 | (4.19) |
| 0 | 0 | 1 | 17,448 | 0.00 | 17,448 | 0.00 |
| 0 | 0 | 7 | 37,003 | 18.82 | 5,286 | 1.83 |
| 0 | 0 | 1 | 2,624 | 0.00 | 2,624 | 0.00 |
| 3 | 95,126 | 166 | 2,947,721 | 3.84 | 17,757 | 0.71 |
| 0 | 0 | 8 | 70,036 | 3.18 | 8,755 | 3.18 |
| 0 | 0 | 30 | 233,414 | 18.25 | 7,780 | 6.41 |
| 0 | 0 | 3 | 143,267 | 5.00 | 47,756 | 5.00 |
| 0 | 0 | 0 | 0 | 0.00 | 0 | 0.00 |
| 0 | 0 | 1 | 23,268 | 4.00 | 23,268 | 4.00 |
| 670 | 5,935,443 | 17,775 | 210,083,343 | 30.66 | 11,819 | 16.62 |
| 27 | 173,754 | 1,040 | 6,557,400 | 10.83 | 6,305 | 4.75 |
| 67 | 328,785 | 1,314 | 9,118,239 | 19.74 | 6,939 | 7.88 |
| 14 | 55,684 | 38 | 138,186 | (27.41) | 3,636 | (0.68) |
| 0 | 0 | 1 | 17,448 | 0.00 | 17,448 | 0.00 |
| 0 | 0 | 8 | 38,844 | 4.98 | 4,856 | (8.13) |
| 0 | 0 | 1 | 2,624 | 0.00 | 2,624 | 0.00 |
| 9 | 156,423 | 171 | 3,227,654 | 9.50 | 18,875 | 6.30 |
| 0 | 0 | 8 | 72,504 | 3.52 | 9,063 | 3.52 |
| 1 | 11,056 | 36 | 311,757 | 33.56 | 8,660 | 11.31 |
| 0 | 0 | 9 | 373,403 | 160.63 | 41,489 | (13.12) |
| | | 1 | 56,938 | 0.00 | 56,938 | 0.00 |
| | | 1 | 24,199 | 4.00 | 24,199 | 4.00 |

MSEP continued on pages 112-113.

# Retirees and Beneficiaries Added and Removed

Six Years Ended June 30, 2004

**MSEP**

**Added to Rolls**

| Fiscal Year Ended | Classification | Benefit Type | Number | Annual Allowances |
|---|---|---|---|---|
| June 30, 2002 | General Employee | Retirement | 1,840 | $ 32,360,047 |
| | | Survivor Of Active | 84 | 842,611 |
| | | Survivor of Retired | 209 | 1,805,486 |
| | | Disability | 0 | 3,474 |
| | | Occupational Disability | 0 | 0 |
| | Lincoln University - Vested | Retirement | 2 | 6,061 |
| | | Survivor Of Active | 0 | 0 |
| | Legislators | Retirement | 8 | 238,058 |
| | | Survivor Of Active | 1 | 6,950 |
| | | Survivor of Retired | 4 | 59,947 |
| | Elected Officials | Retirement | 0 | 304 |
| | | Survivor Of Active | 0 | 2,277 |
| | | Survivor of Retired | 0 | 968 |
| June 30, 2003 | General Employee | Retirement | 1,819 | 33,654,082 |
| | | Survivor Of Active | 76 | 808,507 |
| | | Survivor of Retired | 206 | 1,944,744 |
| | | Disability | 0 | 2,109 |
| | | Occupational Disability | 0 | 0 |
| | Lincoln University - Vested | Retirement | 0 | 0 |
| | | Survivor Of Active | 0 | 0 |
| | Legislators | Retirement | 45 | 880,632 |
| | | Survivor Of Active | 1 | 27,031 |
| | | Survivor of Retired | 4 | 65,987 |
| | Elected Officials | Retirement | 0 | (13,546) |
| | | Survivor Of Active | 0 | 2,369 |
| | | Survivor of Retired | 0 | 1,007 |
| June 30, 2004 | General Employee | Retirement | 2,454 | 42,366,392 |
| | | Survivor Of Active | 91 | 926,617 |
| | | Survivor of Retired | 171 | 1,965,930 |
| | | Disability | 1 | 6,657 |
| | | Occupational Disability | 0 | 0 |
| | Lincoln University - Vested | Retirement | 0 | 0 |
| | | Survivor Of Active | 0 | 0 |
| | Legislators | Retirement | 10 | 182,124 |
| | | Survivor Of Active | 1 | 16,311 |
| | | Survivor of Retired | 3 | 73,196 |
| | Elected Officials | Retirement | 0 | 0 |
| | | Survivor Of Active | 0 | 2,464 |
| | | Survivor of Retired | 0 | 1,045 |

| Removed From Rolls | | Rolls at End of Year | | | | |
|---|---|---|---|---|---|---|
| **Number** | **Annual Allowances** | **Number** | **Annual Allowances** | **Percentage Increase in Annual Allowances** | **Average Annual Allowance** | **Percentage Increase in Average Annual Allowance** |
| 685 | $ 6,249,943 | 18,930 | $ 236,193,447 | 12.43% | $ 12,477 | 5.57% |
| 30 | 137,619 | 1,094 | 7,262,392 | 10.75 | 6,638 | 5.28 |
| 67 | 378,545 | 1,456 | 10,545,180 | 15.65 | 7,243 | 4.38 |
| 7 | 32,754 | 31 | 108,906 | (21.19) | 3,513 | (3.38) |
| 0 | 0 | 1 | 17,448 | 0.00 | 17,448 | 0.00 |
| 0 | 0 | 10 | 44,905 | 15.60 | 4,491 | (7.52) |
| 0 | 0 | 1 | 2,624 | 0.00 | 2,624 | 0.00 |
| 4 | 80,340 | 175 | 3,385,372 | 4.89 | 19,345 | 2.49 |
| 0 | 0 | 9 | 79,454 | 9.59 | 8,828 | (2.59) |
| 1 | 4,195 | 39 | 367,509 | 17.88 | 9,423 | 8.81 |
| 0 | 0 | 9 | 373,707 | 0.08 | 41,523 | 0.08 |
| 0 | 0 | 1 | 59,215 | 4.00 | 59,215 | 4.00 |
| 0 | 0 | 1 | 25,167 | 4.00 | 25,167 | 4.00 |
| 734 | 6,798,563 | 20,015 | 263,048,966 | 11.37 | 13,143 | 5.34 |
| 28 | 97,740 | 1,142 | 7,973,159 | 9.79 | 6,982 | 5.18 |
| 71 | 368,959 | 1,591 | 12,120,965 | 14.94 | 7,618 | 5.18 |
| 3 | 15,849 | 28 | 95,166 | (12.62) | 3,399 | (3.25) |
| 0 | 0 | 1 | 17,448 | 0.00 | 17,448 | 0.00 |
| 1 | 1,051 | 9 | 43,854 | (2.34) | 4,873 | 8.51 |
| 0 | 0 | 1 | 2,624 | 0.00 | 2,624 | 0.00 |
| 4 | 71,803 | 216 | 4,194,201 | 23.89 | 19,418 | 0.38 |
| 0 | 0 | 10 | 106,485 | 34.02 | 10,649 | 20.63 |
| 3 | 20,943 | 40 | 412,553 | 12.26 | 10,314 | 9.46 |
| 0 | 0 | 9 | 360,161 | (3.62) | 40,018 | (3.62) |
| 0 | 0 | 1 | 61,584 | 4.00 | 61,584 | 4.00 |
| 0 | 0 | 1 | 26,174 | 4.00 | 26,174 | 4.00 |
| 733 | 7,302,918 | 21,736 | 298,112,440 | 13.33 | 13,715 | 4.35 |
| 38 | 197,250 | 1,195 | 8,702,526 | 9.15 | 7,282 | 4.30 |
| 96 | 623,128 | 1,666 | 13,463,767 | 11.08 | 8,081 | 6.08 |
| 5 | 21,761 | 24 | 80,062 | (15.87) | 3,336 | (1.85) |
| 0 | 0 | 1 | 17,448 | 0.00 | 17,448 | 0.00 |
| 0 | 0 | 9 | 43,854 | 0.00 | 4,873 | 0.00 |
| 0 | 0 | 1 | 2,624 | 0.00 | 2,624 | 0.00 |
| 5 | 116,367 | 221 | 4,259,958 | 1.57 | 19,276 | (0.73) |
| 0 | 0 | 11 | 122,796 | 15.32 | 11,163 | 4.83 |
| 1 | 20,633 | 42 | 465,116 | 12.74 | 11,074 | 7.37 |
| 0 | 0 | 9 | 360,161 | 0.00 | 40,018 | 0.00 |
| 0 | 0 | 1 | 64,048 | 4.00 | 64,048 | 4.00 |
| 0 | 0 | 1 | 27,219 | 3.99 | 27,219 | 3.99 |

# Retirees and Beneficiaries Added and Removed

Six Years Ended June 30, 2004

**ALJLAP**

| | | Added to Rolls | | Removed From Rolls | |
|---|---|---|---|---|---|
| **Fiscal Year Ended** | **Benefit Type** | **Number** | **Annual Allowances** | **Number** | **Annual Allowances** |
| June 30, 1999 | Retirement | 0 | $ 24,637 | 0 | $ 0 |
| | Survivor Of Active | 0 | 671 | 0 | 0 |
| | Survivor of Retired | 0 | 3,883 | 0 | 0 |
| June 30, 2000 | Retirement | 0 | 23,908 | 1 | 42,874 |
| | Survivor Of Active | 0 | 698 | 1 | 18,148 |
| | Survivor of Retired | 1 | 25,475 | 0 | 0 |
| June 30, 2001 | Retirement | 1 | 57,621 | 1 | 39,647 |
| | Survivor Of Active | 0 | 0 | 0 | 0 |
| | Survivor of Retired | 1 | 25,674 | 0 | 0 |
| June 30, 2002 | Retirement | 1 | 67,877 | 1 | 46,580 |
| | Survivor Of Active | 0 | 0 | 0 | 0 |
| | Survivor of Retired | 0 | 5,582 | 0 | 0 |
| June 30, 2003 | Retirement | 3 | 166,161 | 0 | 0 |
| | Survivor Of Active | 0 | 0 | 0 | 0 |
| | Survivor of Retired | 0 | 5,601 | 0 | 0 |
| June 30, 2004 | Retirement | 1 | 62,331 | 3 | 152,311 |
| | Survivor Of Active | 0 | 0 | 0 | 0 |
| | Survivor of Retired | 2 | 58,362 | 2 | 48,306 |

| Rolls at End of Year | | | | |
|---|---|---|---|---|
| Number | Annual Allowances | Percentage Increase in Annual Allowances | Average Annual Allowance | Percentage Increase in Average Annual Allowance |
| 17 | $ 640,569 | 4.00% | $ 37,681 | 4.00% |
| 1 | 17,450 | 4.00 | 17,450 | 4.00 |
| 6 | 100,960 | 4.00 | 16,827 | 4.00 |
| 16 | 621,603 | (2.96) | 38,850 | 3.10 |
| 0 | 0 | (100.00) | 0 | (100.00) |
| 7 | 126,435 | 25.23 | 18,062 | 7.34 |
| 16 | 639,577 | 2.89 | 39,974 | 2.89 |
| 0 | 0 | 0.00 | 0 | 0.00 |
| 8 | 152,109 | 20.31 | 19,014 | 5.27 |
| 16 | 660,874 | 3.33 | 41,305 | 3.33 |
| 0 | 0 | 0.00 | 0 | 0.00 |
| 8 | 157,691 | 3.67 | 19,711 | 3.67 |
| 19 | 827,035 | 25.14 | 43,528 | 5.38 |
| 0 | 0 | 0.00 | 0 | 0.00 |
| 8 | 163,292 | 3.55 | 20,412 | 3.56 |
| 17 | 737,055 | (10.88) | 43,356 | (0.40) |
| 0 | 0 | 0.00 | 0 | 0.00 |
| 8 | 173,348 | 6.16 | 21,669 | 6.16 |

# Retirees and Beneficiaries Added and Removed

Six Years Ended June 30, 2004

**Judicial Plan**

| Fiscal Year Ended | Benefit Type | Added to Rolls: Number | Added to Rolls: Annual Allowances | Removed From Rolls: Number | Removed From Rolls: Annual Allowances |
|---|---|---|---|---|---|
| June 30, 1999 | Retirement | 22 | $ 1,293,321 | 11 | $ 514,874 |
| | Survivor Of Active | 1 | 53,269 | 3 | 31,176 |
| | Survivor of Retired | 6 | 185,690 | 6 | 142,056 |
| | Disability | 1 | 47,771 | 3 | 130,852 |
| June 30, 2000 | Retirement | 18 | 1,343,591 | 11 | 535,292 |
| | Survivor Of Active | 2 | 76,496 | 1 | 6,813 |
| | Survivor of Retired | 10 | 295,547 | 7 | 93,502 |
| | Disability | 1 | 46,500 | 0 | 0 |
| June 30, 2001 | Retirement | 25 | 2,241,337 | 8 | 354,861 |
| | Survivor Of Active | 2 | 83,627 | 2 | 34,642 |
| | Survivor of Retired | 1 | 76,395 | 4 | 42,983 |
| | Disability | 0 | 1,500 | 0 | 0 |
| June 30, 2002 | Retirement | 11 | 984,612 | 9 | 455,021 |
| | Survivor Of Active | 1 | 57,051 | 1 | 28,541 |
| | Survivor of Retired | 5 | 195,971 | 5 | 84,932 |
| | Disability | 0 | 0 | 1 | 48,000 |
| June 30, 2003 | Retirement | 23 | 1,445,716 | 10 | 560,588 |
| | Survivor Of Active | 0 | 34,820 | 0 | 0 |
| | Survivor of Retired | 6 | 214,029 | 7 | 101,944 |
| | Disability | 0 | 0 | 0 | 0 |
| June 30, 2004 | Retirement | 12 | 1,076,421 | 11 | 652,803 |
| | Survivor Of Active | 0 | 36,471 | 2 | 56,802 |
| | Survivor of Retired | 7 | 269,344 | 4 | 86,633 |
| | Disability | 0 | 0 | 0 | 0 |

| Rolls at End of Year | | | | |
|---|---|---|---|---|
| Number | Annual Allowances | Percentage Increase in Annual Allowances | Average Annual Allowance | Percentage Increase in Average Annual Allowance |
| 231 | $ 10,558,354 | 7.96% | $ 45,707 | 2.82% |
| 43 | 756,728 | 3.01 | 17,598 | 7.80 |
| 80 | 1,226,268 | 3.69 | 15,328 | 3.69 |
| 0 | 0 | (100.00) | 0 | (100.00) |
| 238 | 11,366,653 | 7.66 | 47,759 | 4.49 |
| 44 | 826,411 | 9.21 | 18,782 | 6.73 |
| 83 | 1,428,313 | 16.48 | 17,209 | 12.27 |
| 1 | 46,500 | 100.00 | 46,500 | 100.00 |
| 255 | 13,253,129 | 16.60 | 51,973 | 8.82 |
| 44 | 875,396 | 5.93 | 19,895 | 5.93 |
| 80 | 1,461,725 | 2.34 | 18,272 | 6.18 |
| 1 | 48,000 | 3.23 | 48,000 | 3.23 |
| 257 | 13,782,720 | 4.00 | 53,629 | 3.19 |
| 44 | 903,906 | 3.26 | 20,543 | 3.26 |
| 80 | 1,572,764 | 7.60 | 19,660 | 7.60 |
| 0 | 0 | (100.00) | 0 | (100.00) |
| 270 | 14,667,848 | 6.42 | 54,325 | 1.30 |
| 44 | 938,726 | 3.85 | 21,335 | 3.86 |
| 79 | 1,684,849 | 7.13 | 21,327 | 8.48 |
| 0 | 0 | 0.00 | 0 | 0.00 |
| 271 | 15,091,466 | 2.89 | 55,688 | 2.51 |
| 42 | 918,395 | (2.17) | 21,867 | 2.49 |
| 82 | 1,867,560 | 10.84 | 22,775 | 6.79 |
| 0 | 0 | 0.00 | 0 | 0.00 |

# Short-Term Solvency Test

## Pension Trust Funds

## Ten Years Ended June 30, 2004

### MSEP

| Fiscal Year | Actuarial Accrued Liabilities for: Member Contributions (1) | Current Retirees and Beneficiaries (2) | Active and Inactive Members, Employer Financed Portion (3) | Actuarial Value of Assets | Percentage of Actuarial Liabilities Covered by Assets Available for (1) | (2) | (3) |
|---|---|---|---|---|---|---|---|
| 1995 | 448,559 | $ 1,010,431,608 | $ 2,139,916,413 | $ 2,649,077,134 | 100.0% | 100.0% | 76.6% |
| 1996 | 448,559 | 1,156,347,608 | 2,283,330,316 | 2,927,896,643 | 100.0 | 100.0 | 77.6 |
| 1997 | 448,501 | 1,552,966,747 | 2,930,632,553 | 3,580,974,502 | 100.0 | 100.0 | 69.2 |
| 1998 | 447,716 | 1,688,502,950 | 3,229,936,517 | 4,210,635,094 | 100.0 | 100.0 | 78.1 |
| 1999 | 0 | 1,970,504,367 | 3,535,464,262 | 4,908,820,033 | 100.0 | 100.0 | 83.1 |
| 2000 | 0 | 2,142,487,495 | 3,778,196,697 | 5,511,714,616 | 100.0 | 100.0 | 89.2 |
| 2001 | 0 | 2,496,277,500 | 3,568,889,216 | 5,881,232,850 | 100.0 | 100.0 | 94.8 |
| 2002 | 0 | 2,716,457,033 | 3,577,815,242 | 6,033,133,598 | 100.0 | 100.0 | 92.7 |
| 2003 | 0 | 3,016,029,050 | 3,646,262,356 | 6,057,329,072 | 100.0 | 100.0 | 83.4 |
| 2004 | 0 | 3,405,053,804 | 3,824,957,124 | 6,118,214,495 | 100.0 | 100.0 | 70.9 |

### ALJLAP

| Fiscal Year | Actuarial Accrued Liabilities for: Member Contributions (1) | Current Retirees and Beneficiaries (2) | Active and Inactive Members, Employer Financed Portion (3) | Actuarial Value of Assets | Percentage of Actuarial Liabilities Covered by Assets Available for (1) | (2) | (3) |
|---|---|---|---|---|---|---|---|
| 1995 | $0 | $ 6,088,732 | $ 3,641,223 | $ 6,655,207 | 100.0% | 100.0% | 15.6% |
| 1996 | 0 | 6,196,526 | 4,079,837 | 7,258,814 | 100.0 | 100.0 | 26.0 |
| 1997 | 0 | 6,569,957 | 4,857,224 | 8,864,395 | 100.0 | 100.0 | 47.2 |
| 1998 | 0 | 7,415,852 | 5,471,056 | 10,285,233 | 100.0 | 100.0 | 52.4 |
| 1999 | 0 | 7,883,988 | 6,890,537 | 11,763,737 | 100.0 | 100.0 | 56.3 |
| 2000 | 0 | 7,526,118 | 8,995,625 | 13,191,825 | 100.0 | 100.0 | 63.0 |
| 2001 | 0 | 7,534,368 | 9,275,594 | 14,410,199 | 100.0 | 100.0 | 74.1 |
| 2002 | 0 | 8,268,650 | 9,906,692 | 15,172,619 | 100.0 | 100.0 | 69.7 |
| 2003 | 0 | 9,709,096 | 10,237,391 | 15,626,461 | 100.0 | 100.0 | 57.8 |
| 2004 | 0 | 9,188,086 | 11,196,127 | 16,238,804 | 100.0 | 100.0 | 63.0 |

### Judicial Plan

| Fiscal Year | Actuarial Accrued Liabilities for: Member Contributions (1) | Current Retirees and Beneficiaries (2) | Active and Inactive Members, Employer Financed Portion (3) | Actuarial Value of Assets | Percentage of Actuarial Liabilities Covered by Assets Available for (1) | (2) | (3) |
|---|---|---|---|---|---|---|---|
| 1995 | $0 | $ 81,586,593 | $ 72,060,389 | $ 0 | 100.0% | 0.0% | 0.0% |
| 1996 | 0 | 86,145,180 | 75,588,930 | 0 | 100.0 | 0.0 | 0.0 |
| 1997 | 0 | 99,662,179 | 97,810,394 | 0 | 100.0 | 0.0 | 0.0 |
| 1998 | 0 | 108,392,273 | 99,187,524 | 0 | 100.0 | 0.0 | 0.0 |
| 1999 | 0 | 120,543,611 | 107,258,730 | 6,067,305 | 100.0 | 5.0 | 0.0 |
| 2000 | 0 | 131,199,867 | 110,597,474 | 13,861,769 | 100.0 | 10.6 | 0.0 |
| 2001 | 0 | 143,163,718 | 104,815,186 | 22,613,050 | 100.0 | 15.8 | 0.0 |
| 2002 | 0 | 149,135,989 | 106,979,463 | 29,651,113 | 100.0 | 19.9 | 0.0 |
| 2003 | 0 | 157,923,805 | 109,126,052 | 34,566,516 | 100.0 | 21.9 | 0.0 |
| 2004 | 0 | 162,539,486 | 117,857,978 | 39,120,142 | 100.0 | 24.1 | 0.0 |

# Derivation of Experience Gain (Loss)

Actual experience will never coincide exactly with assumed experience (except by coincidence). Gains and losses may offset each other over a period of years, but sizeable year-to-year variations from assumed experience are common. Detail on the derivation of the experience gain (loss) is shown below.

**MSEP**

| | | $ Millions |
|---|---|---|
| (1) | UAAL* at beginning of year | $605.0 |
| (2) | Normal cost from last valuation | 149.1 |
| (3) | Actual employer contributions | 164.7 |
| (4) | Interest accrual: (1)x.085+[(2)-(3)]x(.085/2) | 50.8 |
| (5) | Expected UAAL before changes: (1)+(2)-(3)+(4) | 640.2 |
| (6) | Change from any changes in benefits, assumptions, or methods | 72.5 |
| (7) | Expected UAAL after changes: (5)+(6) | 712.7 |
| (8) | Actual UAAL at end of year | 1,111.8 |
| (9) | Gain (loss) (7)-(8) | (399.1) |
| (10) | Gain (loss) as a percent of actuarial accrued liabilities at start of year | (6.0)% |

* Unfunded actuarial accrued liability.

| Valuation Date June 30 | Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities |
|---|---|
| 1995 | 0.6% |
| 1996 | 0.4 |
| 1997 | 5.5 |
| 1998 | 5.5 |
| 1999 | 4.7 |
| 2000 | 2.7 |
| 2001 | (4.4) |
| 2002 | (3.8) |
| 2003 | (6.4) |
| 2004 | (6.0) |

**ALJLAP**

| | | $ Millions |
|---|---|---|
| (1) | Unfunded actuarial accrued liability (UAAL) at beginning of year | $4.32 |
| (2) | Normal cost | 0.77 |
| (3) | Employer contributions | 0.95 |
| (4) | Interest | |
| | a. on (1) | 0.37 |
| | b. on (2) | 0.03 |
| | c. on (3) | 0.04 |
| | d. total [a+b-c] | 0.36 |
| (5) | Expected UAAL end of year before changes | 4.50 |
| (6) | Change in UAAL end of year | |
| | a. amendments | 0.00 |
| | b. assumptions | (0.04) |
| | c. methods | 0.00 |
| | d. total | (0.04) |
| (7) | Expected UAAL after changes: (5)+(6d.) | 4.46 |
| (8) | Actual UAAL at end of year | 4.15 |
| (9) | Gain (loss) (7)-(8) | 0.31 |
| (10) | Gain (loss) as a percent of actuarial accrued liabilities at start of year | 1.6% |

| Valuation Date June 30 | Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities |
|---|---|
| 2000 | 0.3% |
| 2001 | (1.3) |
| 2002 | (5.9) |
| 2003 | (8.5) |
| 2004 | 1.6 |

# Derivation of Experience Gain (Loss)

Actual experience will never coincide exactly with assumed experience (except by coincidence). Gains and losses may offset each other over a period of years, but sizeable year-to-year variations from assumed experience are common. Detail on the derivation of the experience gain (loss) is shown below.

**Judicial Plan**

| | | **$ Millions** |
|---|---|---|
| (1) | Unfunded actuarial accrued liability (UAAL) at beginning of year | $232.48 |
| (2) | Employer normal cost middle of year | 7.79 |
| (3) | Employer contributions | 20.63 |
| (4) | Interest | |
| | a. on (1) | 19.76 |
| | b. on (2) | 0.33 |
| | c. on (3) | 0.87 |
| | d. total [a+b-c] | 19.22 |
| (5) | Expected UAAL end of year before changes | 238.86 |
| (6) | Change in UAAL end of year | |
| | a. amendments | 0.00 |
| | b. assumptions | (0.36) |
| | c. methods | 0.00 |
| | d. total | (0.36) |
| (7) | Expected UAAL after changes: (5)+(6d.) | 238.50 |
| (8) | Actual UAAL at end of year | 241.28 |
| (9) | Gain (loss) (7)-(8) | (2.78) |
| (10) | Gain (loss) as a percent of actuarial accrued liabilities at start of year | (1.0)% |

| **Valuation Date June 30** | **Actuarial Gain (Loss) as a Percentage of Beginning Accrued Liabilities** |
|---|---|
| 2000 | (1.7)% |
| 2001 | (3.2) |
| 2002 | (0.2) |
| 2003 | (1.6) |
| 2004 | (1.0) |

# Summary Plan Provisions*

June 30, 2004

### MSEP and MSEP 2000

***(Comparison of Plans for General State Employees)***

| Plan Provision | MSEP | MSEP 2000 |
|---|---|---|
| Membership eligibility | Members who work in a position normally requiring at least 1,000 hours of work a year. | Members hired for the first time on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.<br><br>Members who left state employment prior to becoming vested and return to work on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year. |
| Normal retirement eligibility | Age 65 and active with 4 years of service,<br>Age 65 with 5 years of service,<br>Age 60 with 15 years of service, or<br>"Rule of 80" - minimum age 48. | Age 62 with 5 years of service or "Rule of 80" - minimum age 48. |
| Early retirement eligibility | Age 55 with 10 years of service. | Age 57 with 5 years of service. |
| Benefit | | |
| Life benefit | 1.6% x final average pay (FAP) x service. | 1.7% x FAP x service. |
| Temporary benefit | Not available. | 0.8% x FAP x service (until age 62 - only if retiring under "Rule of 80"). |
| Vesting | 5 years of service. | 5 years of service. |
| In-service cost-of-living adjustment (COLA) | COLA given for service beyond age 65. COLA provisions are determined by employment date. | Not available. |
| COLA | If hired before August 28, 1997, annual COLA is equal to 80% of the change in the consumer price index (CPI) with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.<br><br>If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%. | Annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%. |
| Survivor benefit (Death before retirement) | | |
| Non duty-related death | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children. | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children. |
| Duty-related death | Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement). | Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement). |
| Optional forms of payment (Death after retirement) | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:<br>- Life Income Annuity<br>- Unreduced Joint & 50% Survivor<br>- Joint & 100% Survivor<br>- 60 or 120 Guaranteed Payments<br>- BackDROP | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:<br>- Life Income Annuity<br>- Joint & 50% Survivor<br>- Joint & 100% Survivor<br>- 120 or 180 Guaranteed Payments<br>- BackDROP |

* This summary describes the plan provisions of the Revised Statutes of Missouri (RSMo), as amended, that governed the programs, which MOSERS administered during the period covered by this report. It does not overrule any applicable statute or administrative rule and, in the event of a conflict, the applicable statute or rule would apply. The MSEP 2000 became effective July 1, 2000.

# Summary Plan Provisions

June 30, 2004

## MSEP and MSEP 2000

***(Comparison of Plans for Uniformed Members of the Water Patrol)***

| Plan Provision | MSEP | MSEP 2000 |
|---|---|---|
| Membership eligibility | Members who work in a position normally requiring at least 1,000 hours of work a year. | Members hired for the first time on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.<br><br>Members who left state employment prior to becoming vested and return to work on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year. |
| Normal retirement eligibility | Age 55 and active with 4 years of service,<br>Age 55 with 5 years of service, or<br>"Rule of 80" - minimum age 48. | Age 62 with 5 years of service or "Rule of 80" - minimum age 48. |
| Early retirement eligibility | Not available. | Age 57 with 5 years of service. |
| Benefit | | |
| Life benefit | 1.6% x FAP x service increased by 33.3%. | 1.7% x FAP x service. |
| Temporary benefit | Not available. | 0.8% x FAP x service (until age 62 - only if retiring under "Rule of 80"). |
| Vesting | 5 years of service. | 5 years of service. |
| In-service COLA | COLA given for service beyond age 65. COLA provisions are determined by employment date. | Not available. |
| COLA | If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.<br><br>If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%. | Annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%. |
| Survivor benefit<br>(Death before retirement) | | |
| Non duty-related death | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children. | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children. |
| Duty-related death | Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement). | Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement). |
| Optional forms of payment<br>(Death after retirement) | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:<br>- Life Income Annuity<br>- Unreduced Joint & 50% Survivor<br>- Joint & 100% Survivor<br>- 60 or 120 Guaranteed Payments<br>- BackDROP | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:<br>- Life Income Annuity<br>- Joint & 50% Survivor<br>- Joint & 100% Survivor<br>- 120 or 180 Guaranteed Payments<br>- BackDROP |

# Summary Plan Provisions

June 30, 2004

**MSEP and MSEP 2000**
***(Comparison of Plans for Legislators)***

| Plan Provision | MSEP | MSEP 2000 |
|---|---|---|
| Membership eligibility | Elected to the general assembly. | Elected to the general assembly on or after July 1, 2000. |
| Normal retirement eligibility | Age 55 with 3 full-biennial assemblies. | Age 55 with 3 full-biennial assemblies or "Rule of 80" - minimum age 50. |
| Early retirement eligibility | Not available. | Not available. |
| Benefit<br>Life benefit | $150 per month per biennial assembly. | (Monthly base pay ÷ 24) x service capped at 100% of pay. |
| Temporary benefit | Not available. | Not available. |
| Vesting | 3 full-biennial assemblies. | 3 full-biennial assemblies. |
| In-service COLA | COLA given for service beyond age 65. COLA provisions are determined by employment date. | Not available. |
| COLA | If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.<br><br>If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%. | Benefit adjusted each year based on the percentage increase in the current pay for an active member of the general assembly. |
| Survivor benefit<br>(Death before retirement)<br>Non duty-related death | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children. | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children. |
| Duty-related death | Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement). | Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement). |
| Optional forms of payment<br>(Death after retirement) | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:<br>- Life Income Annuity<br>- Unreduced Joint & 50% Survivor<br>- Joint & 100% Survivor<br>- 60 or 120 Guaranteed Payments | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:<br>- Life Income Annuity<br>- Joint & 50% Survivor<br>- Joint & 100% Survivor<br>- 120 or 180 Guaranteed Payments |

# Summary Plan Provisions

June 30, 2004

**MSEP and MSEP 2000**
***(Comparison of Plans for Elected Officials)***

| Plan Provision | MSEP | MSEP 2000 |
|---|---|---|
| Membership eligibility | Elected to state office. | Elected to state office on or after July 1, 2000. |
| Normal retirement eligibility | Age 65 with 4 years of service,<br>Age 60 with 15 years of service, or<br>"Rule of 80" - minimum age 48. | Age 55 with 4 years of service or "Rule of 80" - minimum age 50. |
| Early retirement eligibility | Age 55 with 10 years of service. | Not available. |
| Benefit<br>Life benefit | 12 or more years of service<br>50% of current pay for highest position held.<br>Less than 12 years of service<br>1.6% x FAP x service. | (Monthly base pay ÷ 24) x service capped at 12 years or 50% of pay. |
| Temporary benefit | Not available. | Not available. |
| Vesting | 4 years of service. | 4 years of service. |
| In-service COLA | COLA provisions determined by amount of service relative to 12 years and date of employment. | Not available. |
| COLA | 12 or more years of service<br>COLA is equal to the percentage increase in the current pay of an active elected state official in the highest position held.<br>Less than 12 years of service<br>If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.<br><br>If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%. | Benefit adjusted each year based on the percentage increase in the current pay for an active elected state official in the highest position held. |
| Survivor benefit<br>(Death before retirement)<br>Non duty-related death | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children. | Survivor benefit to eligible spouse calculated using the Joint & 100% Survivor Option or 80% of the member's Life Income Annuity paid to eligible children. |
| Duty-related death | Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement). | Survivor benefit to eligible spouse or children no less than 50% of current pay (no service requirement). |
| Optional forms of payment<br>(Death after retirement) | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:<br>- Life Income Annuity<br>- Unreduced Joint & 50% Survivor<br>- Joint & 100% Survivor<br>- 60 or 120 Guaranteed Payments | Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include:<br>- Life Income Annuity<br>- Unreduced Joint & 50% Survivor<br>- Joint & 100% Survivor<br>- 120 or 180 Guaranteed Payments |

# Summary Plan Provisions

June 30, 2004

**ALJLAP**

| Plan Provision | Requirement |
|---|---|
| Membership eligibility | Administrative law judge or legal advisor in the Division of Workers' Compensation, a member or legal counsel of the Labor and Industrial Relations Commission, chairperson of the State Board of Mediation, or an administrative hearing commissioner. |
| Normal retirement eligibility | Age 62 with 12 years of service,<br>Age 60 with 15 years of service, or<br>Age 55 with 20 years of service. |
| Reduced retirement eligibility | Age 65 with less than 12 years of service with reduced benefit, based upon years of service relative to 12 years. |
| Benefit formula | <u>12 or more years of service</u><br>50% of the average highest 12 consecutive months of salary. |
| Vesting | Immediate. |
| In-service COLA | Not available. |
| COLA | If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.<br><br>If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%. |
| Survivor benefit<br>(Death before retirement) | Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service to age 70. |
| Survivor benefit<br>(Death after retirement) | Survivor benefit to eligible spouse equal to 50% of the member's annuity at the time of death. |

# Summary Plan Provisions

June 30, 2004

**Judicial Plan**

| Plan Provision | Requirement |
|---|---|
| Membership eligibility | Must be a judge or commissioner of the supreme court or of the court of appeals, or a judge of any circuit court, probate court, magistrate court, court of common pleas, or court of criminal corrections, or a justice of the peace, or a commissioner or deputy commissioner of the circuit court appointed after February 29, 1972. |
| Normal retirement eligibility | Age 62 with 12 years of service,<br>Age 60 with 15 years of service, or<br>Age 55 with 20 years of service. |
| Early retirement eligibility | Age 62 with less than 12 years of service or age 60 with less than 15 years of service with a reduced benefit based on years of service relative to 12 or 15 years. |
| Benefit formula | <u>12 or more years of service</u><br>50% of the FAP.<br><u>Less than 12 or 15 years of service</u><br>If between age 60 and 62<br>(years of service ÷ 15) x 50% of compensation on the highest court served.<br>If age 62<br>(years of service ÷ 12) x 50% of compensation on the highest court served. |
| Vesting | Immediate. |
| In-service COLA | Judges who are at least age 60 and work beyond the date first eligible for unreduced benefits will receive COLAs for each year worked beyond normal retirement eligibility. COLA provisions are determined by date of employment. |
| COLA | If hired before August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a minimum of 4% and a maximum of 5% until reaching 65% cap. Thereafter, the rate is based on 80% of the change in the CPI with maximum rate of 5%.<br><br>If hired on or after August 28, 1997, annual COLA is equal to 80% of the change in the CPI with a maximum rate of 5%. |
| Survivor benefit<br>(Death before retirement) | Survivor benefit to eligible spouse equal to 50% of the benefit the member would have received based on service to age 70. |
| Survivor benefit<br>(Death after retirement) | Survivor benefit to eligible spouse equal to 50% of the member's annuity at the time of death. |

**Contributions**
The plans previously described are noncontributory with the entire cost paid by the state of Missouri. The contribution rate paid by the state for the general state employees, uniformed members of the water patrol, legislators, and elected state officials retirement plan for FY04 was 9.35% of the membership payroll. The contribution rate paid by the state for the ALJLAP for FY04 was 20.12% of the membership payroll. The contribution rate paid by the state for the Judicial Plan for FY04 was 51.68% of the membership payroll.

# Summary Plan Provisions

June 30, 2004

## Life Insurance Plans

***(MOSERS administers basic and optional term life insurance plans for eligible state employees and retirees.)***

| Active Members* | Requirement |
|---|---|
| **Basic Life Insurance**<br>An amount equal to one-times annual salary (with a minimum of $15,000) while actively employed. | Actively employed in an eligible state position resulting in membership in MOSERS. |
| **Duty-Related Death Benefit**<br>Duty-related death benefit equivalent to two-times the annual salary the member was earning at the time of death in addition to the basic life insurance amount of one-times annual salary. | Actively employed in an eligible state position resulting in membership in MOSERS. |
| **Optional Life Insurance**<br>Additional life insurance may be purchased in a flat amount in multiples of $10,000 not to exceed the maximum (the lesser of six-times annual salary or $800,000). Spouse coverage may be purchased in multiples of $10,000 up to a maximum of $100,000; however, the amount of spouse coverage cannot exceed the amount of optional coverage the member has purchased. Coverage for children is available in a flat amount of $10,000 per child. | Actively employed in an eligible state position resulting in membership in MOSERS. |

*Terminating employees may convert coverage up to the amount they had as an active employee at individual rates.

| Retired Members | Requirement |
|---|---|
| **Basic Life Insurance at Retirement**<br>$5,000 basic life insurance during retirement. | Must retire directly from active employment. |
| **Optional Life Insurance at Retirement (MSEP)**<br>An employee may retain up to the lesser of $60,000 or the amount of optional life insurance coverage held at time of retirement at the group rate and may convert any remaining basic and optional life insurance at individual rates. | Must retire directly from active employment. |
| **Optional Life Insurance at Retirement (MSEP 2000)**<br>Under "Rule of 80" an employee may retain the current amount of coverage prior to retirement until age 62 at which time coverage is reduced to $60,000, and may convert any remaining basic and optional life insurance at individual rates. Coverage for spouse and/or children ends at member's retirement and may be converted at individual rates. | Must retire directly from active employment. |

# Summary Plan Provisions

June 30, 2004

**Long-Term Disability (LTD) Plan**

***(MOSERS administers the LTD Plan for eligible state employees who become disabled during active employment.)***

| Plan | Provision |
|---|---|
| **General State Employees, Legislators, and Elected State Officials**<br>Members of MOSERS in a position normally requiring 1,000 hours of work a year are covered under the LTD plan, unless they work for a state agency which has its own LTD plan. | **Long-Term Disability** - Eligible participants receive 60% of their compensation minus primary social security, workers' compensation, and employer provided income. Benefits commence after 90 days of disability or after sick leave expires, whichever occurs last. LTD benefits cease upon the earliest of (i) when disability ends, (ii) when the member is first eligible for normal retirement benefits or is receiving early retirement benefits, (iii) when the member returns to work, or (iv) upon the member's death.<br><br>**Partial Disability** - A member may be considered partially disabled during the benefit waiting period and the 24 months following that period if the member is working in an occupation, but as a result of physical disease, injury, pregnancy, or mental disorder, is unable to earn more than 80% of pre-disability earnings. After the first 24 months, a member may be considered partially disabled if working in an occupation but unable to earn more than 60% of the member's pre-disability earnings. In both instances, work earnings are used to reduce the LTD benefit. |
| **ater Patrol** | Uniformed members who are eligible for statutory occupational disability receive benefits equal to 50% of compensation with no offset for social security at the time of disability. For nonoccupational disabilities, eligible participants receive the same benefit as general employees. |
| **Judges** | In addition to the disability benefits provided to general employees, judges also receive benefits under the state constitution. Participants receive 50% of salary until the current term expires. |

# Changes in Plan Provisions

**Prior Service Credit for Juvenile Court Employees**

Senate Bill 1195 was signed into law on July 2, 2004, by Governor Holden and will allow certain juvenile court personnel whose positions are financed in whole or in part by a public or private grant to receive prior service credit for grant paid service rendered prior to July 1, 1999.

# Actuarial Present Values

As of June 30, 2004

**MSEP**

| **Actuarial Present Value June 30, 2004 for:** | **Actuarial Present Value** | **Portion Covered by Future Normal Cost Contributions** | **Actuarial Accrued Liabilities** |
|---|---|---|---|
| **Active members** | | | |
| Service retirement benefits based on services rendered before and likely to be rendered after valuation date | $3,815,506,864 | $ 798,909,845 | $3,016,597,019 |
| Disability benefits likely to be paid to present active members who become totally and permanently disabled | 127,231,916 | 53,630,963 | 73,600,953 |
| Survivor benefits likely to be paid to widows and children of present active members who die before retiring | 142,570,386 | 42,274,875 | 100,295,511 |
| Separation benefits likely to be paid to present active members | 411,745,347 | 202,308,361 | 209,436,986 |
| Active Member Totals | $4,497,054,513 | $1,097,124,044 | 3,399,930,469 |
| **Members on leave of absence and LTD** | | | |
| Service retirement benefits based on service rendered before the valuation date | | | 98,951,934 |
| **Terminated-vested members** | | | |
| Service retirement benefits based on service rendered before the valuation date | | | 325,376,003 |
| **Retired lives** | | | 3,405,053,804 |
| **BackDROP installment payments incurred, but not yet paid** | | | 698,718 |
| Total actuarial accrued liability | | | 7,230,010,928 |
| Actuarial value of assets | | | 6,118,214,495 |
| Unfunded actuarial accrued liability | | | $1,111,796,433 |

# Actuarial Present Values

As of June 30, 2004

**ALJLAP**

| Actuarial Present Value June 30, 2004 for: | Actuarial Present Value | Portion Covered by Future Normal Cost Contributions | Actuarial Accrued Liabilities |
|---|---|---|---|
| **Active members** | | | |
| Service retirement benefits based on services rendered before and likely to be rendered after valuation date | $12,461,575 | $4,728,668 | $ 7,732,907 |
| Disability benefits likely to be paid to present active members who become totally and permanently disabled | 230,220 | 147,760 | 82,460 |
| Survivor benefits likely to be paid to widows and children of present active members who die before retiring | 503,220 | 308,791 | 194,429 |
| Separation benefits likely to be paid to present active members | 1,300,320 | 876,011 | 424,309 |
| Active member totals | $14,495,335 | $6,061,230 | 8,434,105 |
| **Terminated-vested members** | | | |
| Service retirement benefits based on service rendered before the valuation date | | | 2,762,022 |
| **Retired lives** | | | 9,188,086 |
| Total actuarial accrued liability | | | 20,384,213 |
| Actuarial value of assets | | | 16,238,804 |
| Unfunded actuarial accrued liability | | | $ 4,145,409 |

# Actuarial Present Values

As of June 30, 2004

**Judicial Plan**

| Actuarial Present Value June 30, 2004 for: | Actuarial Present Value | Portion Covered by Future Normal Cost Contributions | Actuarial Accrued Liabilities |
|---|---|---|---|
| **Active members** | | | |
| Service retirement benefits based on services rendered before and likely to be rendered after valuation date | $150,203,050 | $50,160,843 | $100,042,207 |
| Disability benefits likely to be paid to present active members who become totally and permanently disabled | 1,797,717 | 1,395,313 | 402,404 |
| Survivor benefits likely to be paid to widows and children of present active members who die before retiring | 5,580,698 | 3,156,896 | 2,423,802 |
| Active member totals | $157,581,465 | $54,713,052 | 102,868,413 |
| **Terminated-vested members** | | | |
| Service retirement benefits based on service rendered before the valuation date | | | 14,989,565 |
| **Retired lives** | | | 162,539,486 |
| Total actuarial accrued liability | | | 280,397,464 |
| Actuarial value of assets | | | 39,120,142 |
| Unfunded actuarial accrued liability | | | $241,277,322 |

# A Passage Through Time

After the triumphant return of the expedition to St. Louis on September 23, 1806, Lewis and Clark went on to help create the future state of Missouri. Lewis served as territorial governor until his death in 1809. Clark spent a long life in St. Louis, always playing a key role in Missouri's growth and development. He served as general of the militia, territorial governor, and finally as a U.S. Indian agent for the Missouri River. He died in 1838 and is buried in Bellefontaine Cemetery in St. Louis.

# A Passage Through Time


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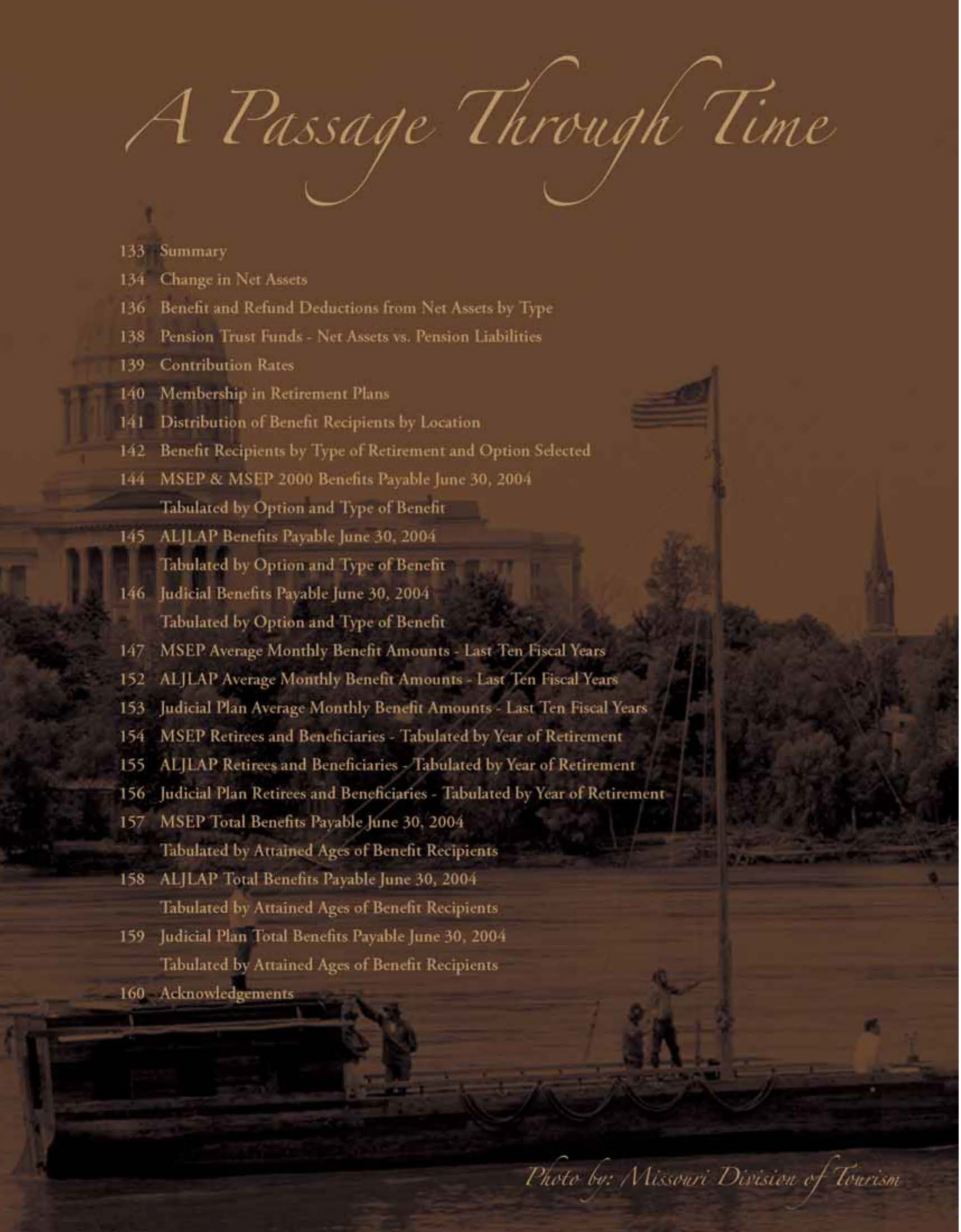


*Photo by: Missouri Division of Tourism*

# Summary

MOSERS opted for early implementation of GASB Statement No. 44, Economic Condition Reporting; The Statistical Section, issued in May 2004. This pronoucement establishes and modifies requirements related to the supplementary information presented in this section of this report.

**Plan Membership**

Membership in the pension trusts administered by MOSERS increased by 1,067. Active members decreased by 1,645, retired members and their beneficiaries increased by 1,887, and terminated-vested members increased by 825. Membership data for the last ten years ended June 30, 2004, can be found on page 140. Page 141 depicts the location of benefit recipients, showing that the majority remain in the state of Missouri after retirement.

**Net Assets vs. Liabilities**

The charts on page 138 graphically represent the funding progress of the pension plans for the ten years ended June 30, 2004. The area chart on the top of the page shows the portion of the pension liabilities that are unfunded compared to the portion covered by assets in the trust funds. The chart on the bottom of the page illustrates the funded ratio of the plans for the ten years ended June 30, 2004.

The existence of the unfunded actuarial accrued liabilities is not necessarily an indication of financial problems, but the fluctuations are important and must be monitored and controlled.

The remainder of this section contains various statistical and historical data considered useful in evaluating the condition of the plans.

# Change in Net Assets

Last Ten Fiscal Years

| Fiscal Year | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|
| **MSEP** | | | | |
| Additions | | | | |
| Employer contributions | $108,902,372 | $137,007,112 | $146,383,371 | $152,090,687 |
| Member service purchases | 753,984 | 726,527 | 640,590 | 1,035,738 |
| Service transfers in | 170,081 | 135,598 | 2,238,691 | 36,908 |
| Investment income (net of expense) | 393,915,517 | 453,955,454 | 653,958,265 | 661,480,958 |
| Other | 0 | 9,129 | 235,279 | 14,925 |
| Total additions to plan net assets | 503,741,954 | 591,833,820 | 803,456,196 | 814,659,216 |
| Deductions | | | | |
| Benefits | 96,198,413 | 115,627,764 | 126,941,341 | 149,261,681 |
| Refunds | 0 | 0 | 102 | 1,514 |
| Service transfers out | 0 | 30,327 | 2,091,233 | 0 |
| Administrative expenses | 3,060,262 | 3,221,578 | 3,563,018 | 4,500,944 |
| Legal settlements | 0 | 23,148,000 | 0 | 18,998 |
| Total deductions from plan net assets | 99,258,675 | 142,027,669 | 132,595,694 | 153,783,137 |
| Change in net assets | $404,483,279 | $449,806,151 | $670,860,502 | $660,876,079 |
| **ALJLAP** | | | | |
| Additions | | | | |
| Employer contributions | $ 498,233 | $ 548,276 | $ 652,709 | $ 564,295 |
| Investment income (net of expense) | 986,426 | 1,122,107 | 1,614,183 | 1,613,972 |
| Other | 0 | 23 | 34 | 36 |
| Total additions to plan net assets | 1,484,659 | 1,670,406 | 2,266,926 | 2,178,303 |
| Deductions | | | | |
| Benefits | 600,650 | 633,527 | 616,859 | 677,213 |
| Administrative expenses | 7,663 | 7,963 | 8,795 | 10,981 |
| Legal settlements | 0 | 0 | 0 | 46 |
| Total deductions from plan net assets | 608,313 | 641,490 | 625,654 | 688,240 |
| Change in net assets | $ 876,346 | $ 1,028,916 | $ 1,641,272 | $ 1,490,063 |
| **Judicial Plan** | | | | |
| Additions | | | | |
| Employer contributions | $ 9,188,599 | $ 9,907,505 | $ 10,450,270 | $ 11,433,457 |
| Investment income (net of expense) | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 |
| Total additions to plan net assets | 9,188,599 | 9,907,505 | 10,450,270 | 11,433,457 |
| Deductions | | | | |
| Benefits | 9,188,599 | 9,907,505 | 10,450,270 | 11,433,457 |
| Administrative expenses | 0 | 0 | 0 | 0 |
| Total deductions from plan net assets | 9,188,599 | 9,907,505 | 10,450,270 | 11,433,457 |
| Change in net assets | $ 0 | $ 0 | $ 0 | $0 |
| **Internal Service Fund** | | | | |
| Operating revenues | | | | |
| Premium receipts | $ 13,987,955 | $ 14,110,249 | $ 16,255,848 | $ 16,720,199 |
| Miscellaneous income | 481,057 | 396,889 | 379,684 | 423,419 |
| Total operating revenues | 14,469,012 | 14,507,138 | 16,635,532 | 17,143,618 |
| Operating expenses | | | | |
| Premium disbursements | 13,930,820 | 15,044,250 | 16,200,297 | 16,653,714 |
| Premium refunds | 57,161 | 53,652 | 55,550 | 66,485 |
| Administrative expenses | 349,835 | 330,702 | 363,276 | 470,791 |
| Other | 5,000 | 0 | 0 | 0 |
| Total operating expenses | 14,342,816 | 15,428,604 | 16,619,123 | 17,190,990 |
| Non-operating revenues | | | | |
| Investment income | 79,215 | 81,687 | 50,608 | 58,889 |
| Change in net assets | $ 205,411 | $ (839,779) | $ 67,017 | $ 11,517 |

| 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| $197,909,834 | $202,330,547 | $ 215,750,128 | $ 209,515,026 | $156,576,150 | $ 164,691,836 |
| 1,151,328 | 1,991,206 | 1,918,572 | 3,913,426 | 3,690,820 | 3,426,367 |
| 147,315 | 3,468,697 | 167,640 | 48,840 | 53,119 | 166,510 |
| 504,026,290 | 402,878,683 | (112,164,123) | (348,106,057) | 332,901,027 | 1,047,448,203 |
| 659,215 | 629,924 | 418,663 | 447,462 | 437,574 | 469,959 |
| 703,893,982 | 611,299,057 | 106,090,880 | (134,181,303) | 493,658,690 | 1,216,202,875 |
| | | | | | |
| 155,299,924 | 179,690,822 | 217,862,853 | 268,480,982 | 319,607,447 | 367,248,099 |
| 0 | 889 | 0 | 0 | 4,019 | 8,585 |
| 0 | 18,609 | 31,482 | 27,970 | 2,191,487 | 529,177 |
| 5,763,229 | 5,487,531 | 5,749,965 | 5,753,812 | 5,954,365 | 5,693,938 |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 161,063,153 | 185,197,851 | 223,644,300 | 274,262,764 | 327,757,318 | 373,479,799 |
| $542,830,829 | $426,101,206 | $ (117,553,420) | $(408,444,067) | $165,901,372 | $ 842,723,076 |
| | | | | | |
| $ 639,285 | $ 807,022 | $ 1,074,946 | $ 1,072,562 | $951,023 | $ 945,950 |
| 1,205,813 | 961,336 | (273,380) | (874,249) | 862,381 | 2,810,152 |
| 1,577 | 1,503 | 1,020 | 1,124 | 1,134 | 1,261 |
| 1,846,675 | 1,769,861 | 802,586 | 199,437 | 1,814,538 | 3,757,363 |
| | | | | | |
| 747,663 | 755,574 | 776,422 | 836,615 | 969,918 | 1,003,355 |
| 13,788 | 13,094 | 14,015 | 14,450 | 15,425 | 15,276 |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 761,451 | 768,668 | 790,437 | 851,065 | 985,343 | 1,018,631 |
| $ 1,085,224 | $ 1,001,193 | $ 12,149 | $ (651,628) | $829,195 | $ 2,738,732 |
| | | | | | |
| $ 17,862,353 | $ 19,988,676 | $ 22,473,913 | $ 22,088,485 | $ 20,802,140 | $ 20,636,314 |
| 452,499 | 869,566 | (391,124) | (1,680,566) | 1,932,815 | 6,952,763 |
| 592 | 1,360 | 1,460 | 2,160 | 2,541 | 3,119 |
| 18,315,444 | 20,859,602 | 22,084,249 | 20,410,079 | 22,737,496 | 27,592,196 |
| | | | | | |
| 12,229,325 | 13,292,188 | 15,010,098 | 15,943,642 | 16,870,011 | 17,658,269 |
| 5,174 | 11,844 | 20,051 | 27,778 | 34,571 | 37,795 |
| 12,234,499 | 13,304,032 | 15,030,149 | 15,971,420 | 16,904,582 | 17,696,064 |
| $ 6,080,945 | $ 7,555,570 | $ 7,054,100 | $ 4,438,659 | $ 5,832,914 | $ 9,896,132 |
| | | | | | |
| $ 18,942,592 | $ 20,119,784 | $ 23,185,529 | $ 24,753,708 | $ 25,223,043 | $ 25,771,703 |
| 444,617 | 436,488 | 464,351 | 436,489 | 436,494 | 380,763 |
| 19,387,209 | 20,556,272 | 23,649,880 | 25,190,197 | 25,659,537 | 26,152,466 |
| | | | | | |
| 18,877,414 | 20,049,507 | 22,480,704 | 24,675,520 | 25,169,883 | 25,736,083 |
| 65,177 | 70,277 | 704,825 | 78,188 | 53,160 | 35,620 |
| 622,545 | 519,271 | 410,906 | 439,232 | 421,507 | 474,040 |
| 5,000 | 0 | 0 | 0 | 0 | 0 |
| 19,570,136 | 20,639,055 | 23,596,435 | 25,192,940 | 25,644,550 | 26,245,743 |
| | | | | | |
| 55,323 | 68,349 | 81,717 | 47,767 | 31,179 | 24,353 |
| $ (127,604) | $ (14,434) | $ 135,162 | $ 45,024 | $ 46,166 | $ (68,924) |

# Benefit and Refund Deductions from Net Assets by Type

Last Ten Fiscal Years

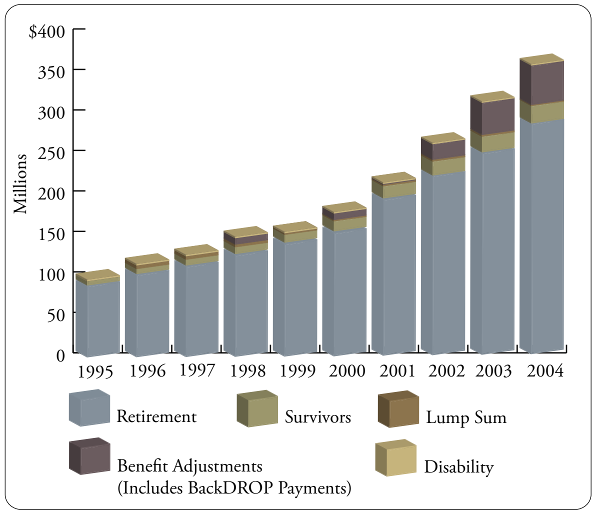
| Fiscal Year | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|
| **MSEP** | | | | | |
| Type of benefit | | | | | |
| Retirement | $90,493,659 | $104,590,632 | $115,074,410 | $129,252,252 | $143,330,197 |
| Survivors | 5,325,284 | 6,219,652 | 7,265,874 | 8,498,948 | 9,812,877 |
| Disability | 379,470 | 347,600 | 310,485 | 279,617 | 245,284 |
| Lump sum | 0 | 4,469,880 | 4,290,572 | 3,178,164 | 1,871,798 |
| Benefit adjustments | 0 | 0 | 0 | 8,052,700 | 39,768 |
| Total benefits | $96,198,413 | $115,627,764 | $126,941,341 | $149,261,681 | $155,299,924 |
| **Refunds** | $ 0 | $ 0 | $ 102 | $ 1,514 | $ 0 |
| **ALJLAP** | | | | | |
| Type of benefit | | | | | |
| Retirement | $ 552,461 | $ 583,410 | $ 523,264 | $ 564,230 | $ 630,161 |
| Survivors | 48,189 | 50,117 | 93,595 | 112,983 | 117,502 |
| Total benefits | $ 600,650 | $ 633,527 | $ 616,859 | $ 677,213 | $ 747,663 |
| **Judicial Plan** | | | | | |
| Type of benefit | | | | | |
| Retirement | $ 7,631,644 | $ 8,150,536 | $ 8,607,999 | $ 9,499,727 | $ 10,202,222 |
| Survivors | 1,554,012 | 1,718,861 | 1,767,232 | 1,850,701 | 1,969,206 |
| Disability | 2,943 | 38,108 | 75,039 | 83,029 | 57,897 |
| Total benefits | $ 9,188,599 | $ 9,907,505 | $ 10,450,270 | $ 11,433,457 | $ 12,229,325 |

| Fiscal Year | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| **MSEP** | | | | | |
| Type of benefit | | | | | |
| Retirement | $157,184,011 | $199,479,082 | $ 229,333,190 | $ 257,883,204 | $295,200,938 |
| Survivors | 12,602,200 | 15,184,214 | 17,482,292 | 19,689,766 | 21,930,438 |
| Disability | 219,550 | 178,337 | 145,856 | 118,279 | 102,696 |
| Lump sum | 1,522,312 | 1,886,958 | 1,893,194 | 1,384,599 | 320,267 |
| Benefit adjustments | 8,162,749 | 1,134,262 | 19,626,450 | 40,531,599 | 49,693,761 |
| Total benefits | $179,690,822 | $217,862,853 | $ 268,480,982 | $ 319,607,447 | $367,248,100 |
| **Refunds** | $889 | $0 | $0 | $ 4,019 | $ 8,585 |
| **ALJLAP** | | | | | |
| Type of benefit | | | | | |
| Retirement | $ 627,865 | $ 629,094 | $ 680,391 | $ 808,124 | $ 840,963 |
| Survivors | 127,709 | 147,328 | 156,224 | 161,794 | 162,392 |
| Total benefits | $ 755,574 | $ 776,422 | $ 836,615 | $ 969,918 | $ 1,003,355 |
| **Judicial Plan** | | | | | |
| Type of benefit | | | | | |
| Retirement | $ 11,054,218 | $ 12,621,473 | $ 13,525,249 | $ 14,256,361 | $ 14,913,678 |
| Survivors | 2,192,748 | 2,340,625 | 2,379,860 | 2,613,650 | 2,744,591 |
| Disability | 45,222 | 48,000 | 38,533 | 0 | 0 |
| Total benefits | $ 13,292,188 | $ 15,010,098 | $ 15,943,642 | $ 16,870,011 | $ 17,658,269 |

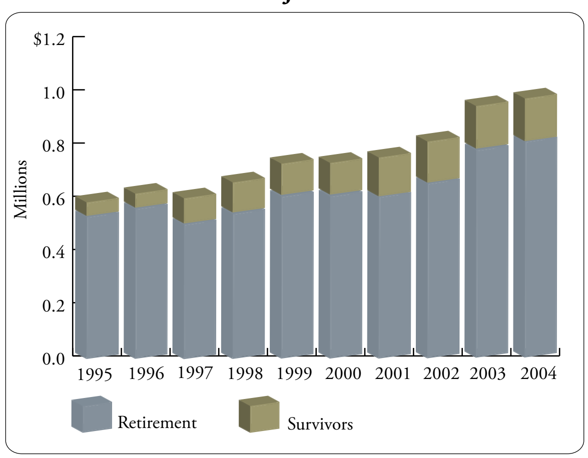
# Benefit and Refund Deductions from Net Assets by Type

Last Ten Fiscal Years

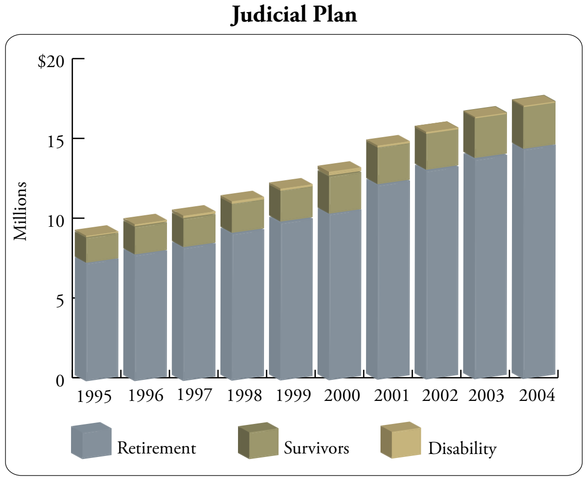
**MSEP**




**ALJLAP**



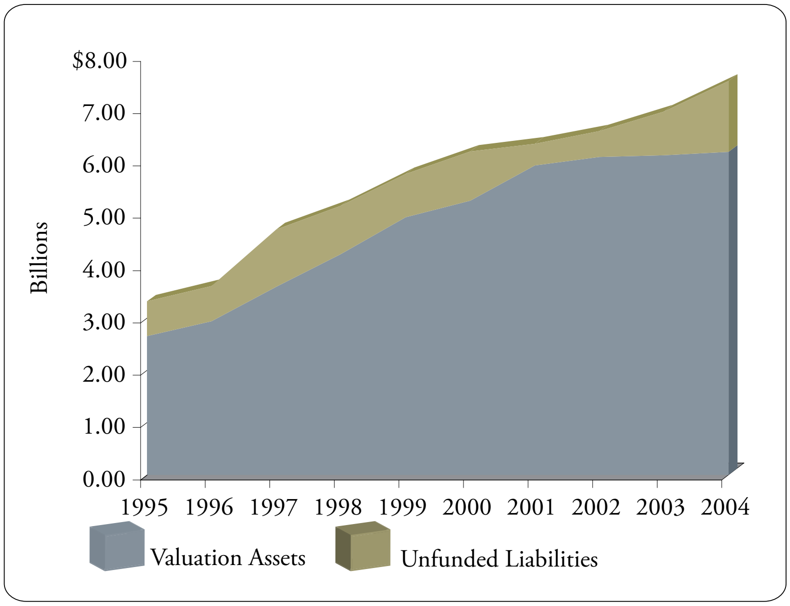

**Judicial Plan**



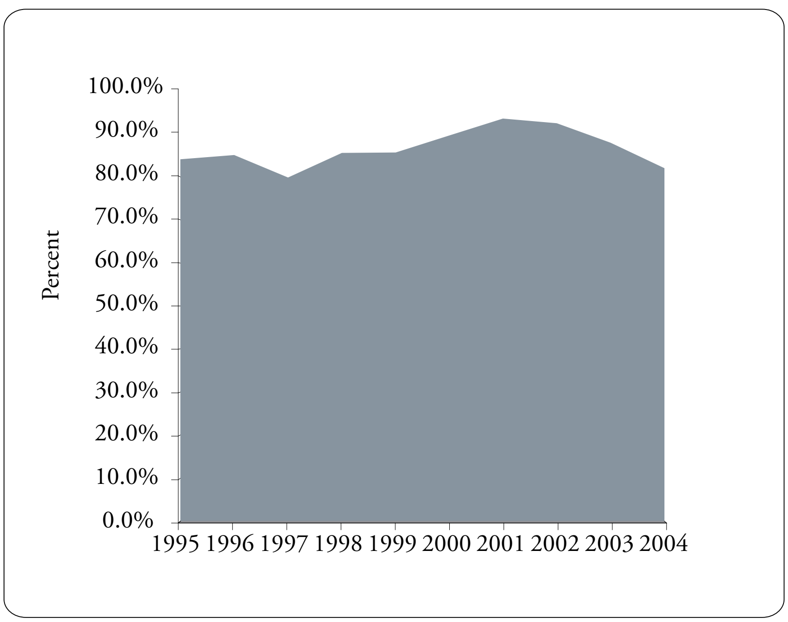
# Net Assets vs. Pension Liabilities

Ten Years Ended June 30, 2004

**Actuarial Accrued Liabilities**

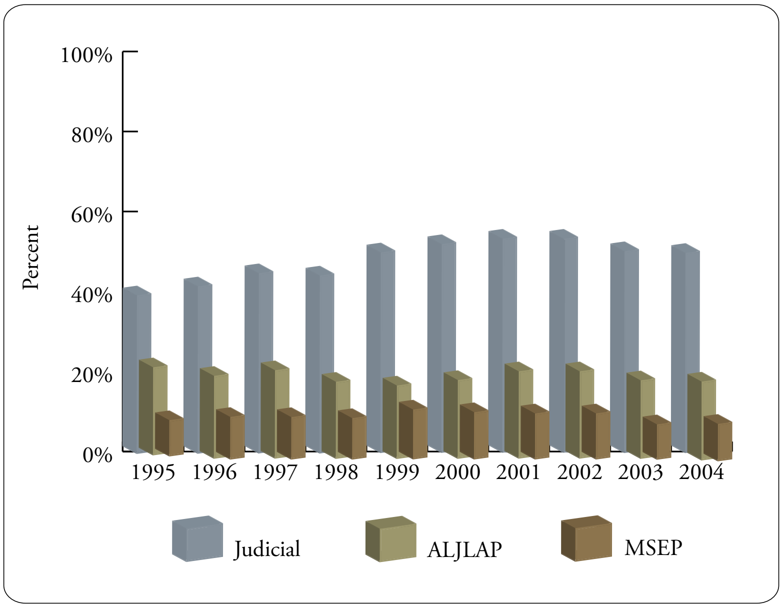



**Valuation Assets as Percents of Pension Liabilities**



# Contribution Rates

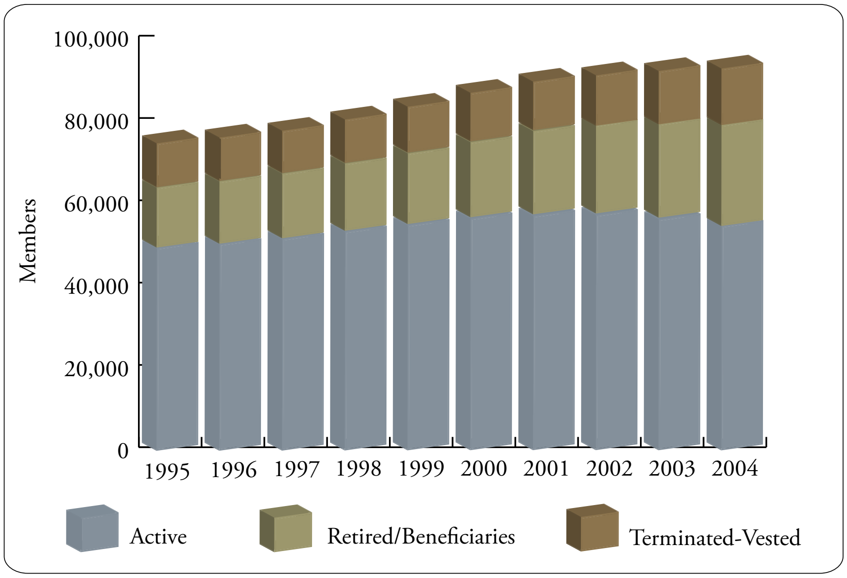
Last Ten Fiscal Years




| Fiscal Year | MSEP | ALJLAP | Judicial |
|---|---|---|---|
| 1995 | 9.04% | 22.50% | 40.85% |
| 1996 | 10.69 | 21.16 | 43.14 |
| 1997 | 10.66 | 22.60 | 46.50 |
| 1998 | 10.40 | 19.66 | 45.91 |
| 1999 | 12.58 | 18.70 | 51.81 |
| 2000 | 11.91 | 20.10 | 53.92 |
| 2001 | 11.59 | 22.32 | 55.30 |
| 2002 | 11.59 | 22.32 | 55.30 |
| 2003 | 8.81 | 20.02 | 52.12 |
| 2004 | 9.35 | 20.12 | 51.68 |

# Membership in Retirement Plans

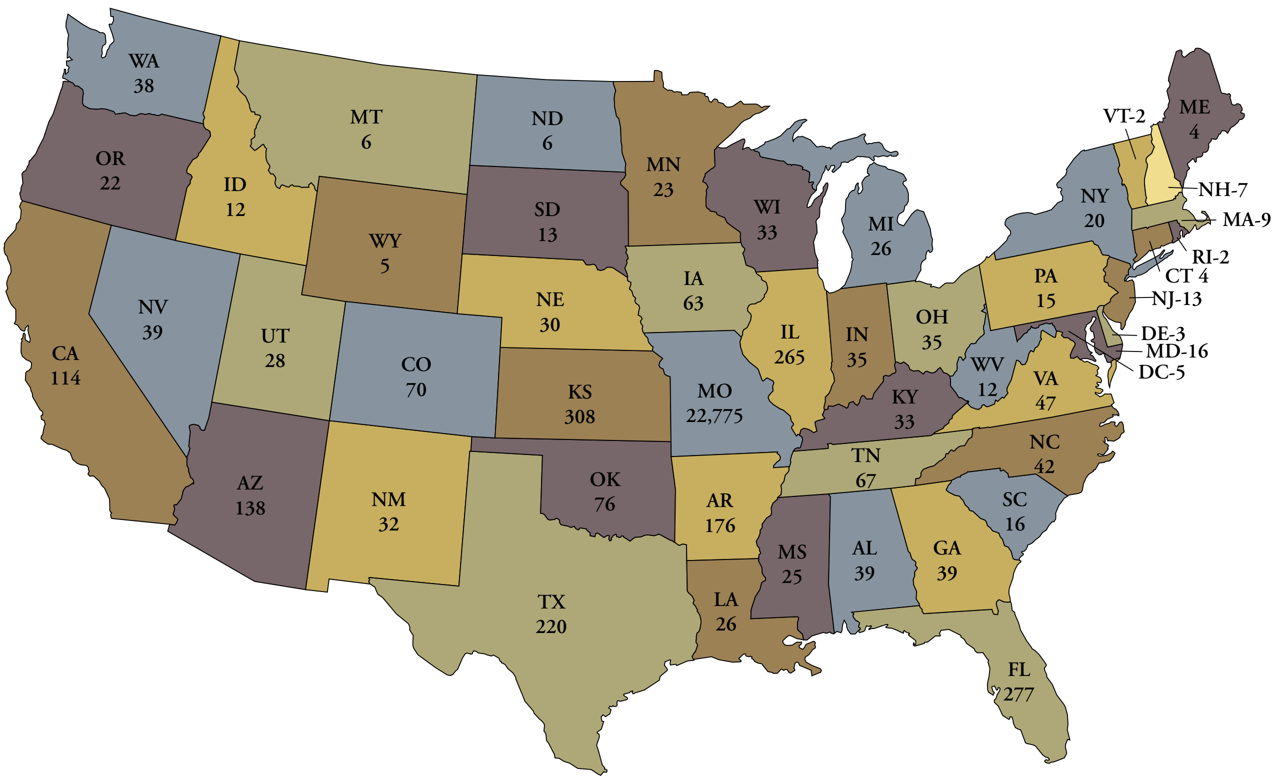
Last Ten Fiscal Years




| Fiscal Year | Active | Retired/ Beneficiaries | Terminated Vested | Totals |
|---|---|---|---|---|
| 1995 | 50,918 | 14,747 | 10,673 | 76,338 |
| 1996 | 51,837 | 15,362 | 10,548 | 77,747 |
| 1997 | 53,147 | 15,963 | 10,273 | 79,383 |
| 1998 | 54,951 | 16,616 | 10,561 | 82,128 |
| 1999 | 56,571 | 17,495 | 11,181 | 85,247 |
| 2000 | 58,201 | 18,582 | 11,858 | 88,641 |
| 2001 | 58,869 | 20,642 | 11,837 | 91,348 |
| 2002 | 59,066 | 21,910 | 12,339 | 93,315 |
| 2003 | 58,007 | 23,292 | 13,073 | 94,372 |
| 2004 | 56,362 | 25,179 | 13,898 | 95,439 |

# *Distribution of Benefit Recipients by Location*

June 30, 2004




**Recipients Outside Continental United States**

| | | | |
|---|---|---|---|
| Alaska - 6 | Columbia (South America) - 1 | Israel -1 | South Korea - 1 |
| Argentina - 1 | Germany - 1 | Mexico - 1 | Sweden - 1 |
| Australia -1 | Hawaii - 4 | Nepal - 1 | The Netherlands - 1 |
| Canada - 3 | Ireland - 1 | Puerto Rico - 1 | United Kingdom - 1 |

# Benefit Recipients by Type of Retirement and Option Selected

As of June 30, 2004

**MSEP**

| Amount of Monthly Benefit | Number of Benefit Recipients | Type of Retirement A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|---|
| $1 - $250 | 3,379 | 1,444 | 1,111 | 365 | 430 | 12 | 0 | 17 |
| 251 - 500 | 4,809 | 2,735 | 1,211 | 356 | 471 | 10 | 0 | 26 |
| 501 - 750 | 3,759 | 2,774 | 486 | 181 | 302 | 2 | 0 | 14 |
| 751 - 1,000 | 2,820 | 2,359 | 193 | 96 | 165 | 0 | 0 | 7 |
| 1001 - 1250 | 2,068 | 1,820 | 70 | 77 | 100 | 0 | 0 | 1 |
| 1,251 - 1,500 | 1,678 | 1,538 | 35 | 40 | 62 | 0 | 1 | 2 |
| 1,501 - 1,750 | 1,388 | 1,292 | 16 | 30 | 49 | 0 | 0 | 1 |
| 1,751 - 2,000 | 1,198 | 1,137 | 9 | 12 | 39 | 0 | 0 | 1 |
| Over 2,000 | 3,818 | 3,653 | 23 | 51 | 91 | 0 | 0 | 0 |
| Total | 24,917 | 18,752 | 3,154 | 1,208 | 1,709 | 24 | 1 | 69 |

**ALJLAP**

| Amount of Monthly Benefit | Number of Benefit Recipients | Type of Retirement A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|---|
| $1 - $250 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 251 - 500 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 501 - 750 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 751 - 1,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1001 - 1250 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1,251 - 1,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1,501 - 1,750 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 1,751 - 2,000 | 3 | 0 | 1 | 0 | 2 | 0 | 0 | 0 |
| Over 2,000 | 20 | 15 | 1 | 0 | 4 | 0 | 0 | 0 |
| Total | 25 | 15 | 2 | 0 | 8 | 0 | 0 | 0 |

**Judicial Plan**

| Amount of Monthly Benefit | Number of Benefit Recipients | Type of Retirement A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|---|
| $1 - $250 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 251 - 500 | 12 | 0 | 6 | 2 | 4 | 0 | 0 | 0 |
| 501 - 750 | 9 | 0 | 1 | 1 | 7 | 0 | 0 | 0 |
| 751 - 1,000 | 12 | 0 | 2 | 3 | 7 | 0 | 0 | 0 |
| 1001 - 1250 | 7 | 0 | 2 | 3 | 2 | 0 | 0 | 0 |
| 1,251 - 1,500 | 17 | 1 | 9 | 4 | 3 | 0 | 0 | 0 |
| 1,501 - 1,750 | 10 | 0 | 1 | 3 | 6 | 0 | 0 | 0 |
| 1,751 - 2,000 | 10 | 0 | 3 | 1 | 5 | 0 | 0 | 1 |
| Over 2,000 | 317 | 220 | 25 | 25 | 47 | 0 | 0 | 0 |
| Total | 395 | 221 | 49 | 42 | 82 | 0 | 0 | 1 |

**Option Selected**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 32 | 90 | 46 | 134 | 2 | 630 | 749 | 56 | 1,640 |
| 7 | 38 | 96 | 27 | 108 | 5 | 940 | 1,127 | 15 | 2,446 |
| 11 | 40 | 64 | 24 | 88 | 8 | 694 | 993 | 4 | 1,833 |
| 10 | 23 | 53 | 15 | 107 | 3 | 468 | 818 | 1 | 1,322 |
| 13 | 17 | 26 | 8 | 117 | 0 | 401 | 547 | 0 | 939 |
| 15 | 10 | 21 | 8 | 145 | 2 | 285 | 402 | 0 | 790 |
| 7 | 9 | 17 | 8 | 170 | 0 | 286 | 215 | 0 | 676 |
| 13 | 9 | 21 | 7 | 184 | 2 | 223 | 176 | 1 | 562 |
| 37 | 7 | 38 | 14 | 545 | 1 | 1,027 | 664 | 0 | 1,485 |
| 113 | 185 | 426 | 157 | 1,598 | 23 | 4,954 | 5,691 | 77 | 11,693 |

**Option Selected**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 |
| 19 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 1 |

**Option Selected**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 4 |
| 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 |
| 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 7 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 9 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 6 |
| 3 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 4 |
| 4 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 1 |
| 273 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 9 |
| 301 | 0 | 0 | 0 | 53 | 0 | 0 | 0 | 0 | 41 |

**Type of Retirement**

A - Normal Retirement

etirement

C - Survivor of Active

D - Survivor of Retired

E - Disability

F - Occupational Disability (Water Patrol)

G - Ex-spouse

**Option Selected**

1 - Automatic 50% Joint and Survivor

2 - 60 Month Guaranteed

3 - 120 Month Guaranteed

4 - 180 Month Guaranteed

5 - 50% Joint and Survivor

6 - 75% Joint and Survivor

7 - 100% Joint and Survivor

8 - Unreduced 50% Joint and Survivor

9 - Automatic Minor Survivor

10- No Survivor option (includes pop-ups)

# Benefits Payable

June 30, 2004

## Tabulated by Option and Type of Benefit

**MSEP Benefits ***

| Type of Benefit | Number | Annual Funded Benefits | Average Annual Benefits |
|---|---|---|---|
| **Service retirement** | | | |
| Life annuity | 4,597 | $43,112,023 | $ 9,378 |
| 50% joint and survivor | 5,037 | 65,716,575 | 13,047 |
| 75% joint and survivor | 8 | 80,310 | 10,039 |
| 100% joint and survivor | 2,215 | 34,858,245 | 15,737 |
| 5 year certain and life | 127 | 1,050,943 | 8,275 |
| 10 year certain and life | 99 | 719,965 | 7,272 |
| Survivor beneficiary | 1,589 | 12,663,863 | 7,970 |
| Total | 13,672 | 158,201,924 | 11,571 |
| **Disability retirement** | 25 | 98,544 | 3,942 |
| **Death-in-service** | 1,205 | 8,878,935 | 7,368 |
| Grand total | 14,902 | $167,179,403 | 11,219 |

* Count includes 9 Lincoln University plan members

**MSEP 2000 Benefits**

| Type of Benefit | Number | Annual Funded Benefits | Average Annual Benefits |
|---|---|---|---|
| **Service retirement** | | | |
| Life annuity | 6,711 | $ 97,852,235 | $14,581 |
| 50% joint and survivor | 1,401 | 31,092,721 | 22,193 |
| 100% joint and survivor | 1,162 | 22,012,926 | 18,944 |
| 5 year certain and life | 57 | 735,302 | 12,900 |
| 10 year certain and life | 269 | 3,199,379 | 11,894 |
| 15 year certain and life | 141 | 1,350,103 | 9,575 |
| Survivor beneficiary | 113 | 1,203,866 | 10,654 |
| Total | 9,854 | 157,446,532 | 15,978 |
| **Disability retirement** | 0 | 0 | 0 |
| **Death-in-service** | 1 | 1,123 | 1,123 |
| Grand total | 9,855 | $157,447,655 | 15,976 |

# Benefits Payable

June 30, 2004

## Tabulated by Option and Type of Benefit

**ALJLAP**

| Type of Benefit | Number | Annual Funded Benefits | Average Annual Benefits |
|---|---|---|---|
| **Service retirement** | | | |
| Life annuity | 1 | $ 50,388 | $50,388 |
| 50% joint and survivor | 16 | 686,669 | 42,917 |
| Survivor beneficiary | 8 | 173,352 | 21,669 |
| Total | 25 | $910,409 | 36,416 |

# Benefits Payable

June 30, 2004

## Tabulated by Option and Type of Benefit

**Judicial Plan**

| **Type of Benefit** | **Number** | **Annual Funded Benefits** | **Average Annual Benefits** |
|---|---|---|---|
| **Service retirement** | | | |
| Life annuity | 6 | $ 332,808 | $55,468 |
| 50% joint and survivor | 265 | 14,824,135 | 55,940 |
| Survivor beneficiary | 82 | 1,869,948 | 22,804 |
| Total | 353 | 17,026,891 | 48,235 |
| | | | |
| Death-in-service | 44 | 978,883 | 22,247 |
| Grand total | 397 | $18,005,774 | 45,355 |

# Average Monthly Benefit Amounts

Ten Years Ended June 30, 2004

**MSEP**

| Member Retiring During Fiscal Year: | | Years Credited Service By Category <5 | 5-10 | 10-15 | 15-20 | 20-25 | 25-30 | 30+ | All Members |
|---|---|---|---|---|---|---|---|---|---|
| 1995 | Average monthly benefit | $ 72 | $ 244 | $ 320 | $ 521 | $ 737 | $1,074 | $1,468 | $ 807 |
| | Average final average salary | $ 889 | $1,698 | $1,710 | $1,809 | $1,992 | $2,313 | $2,495 | $2,054 |
| | Number of retirees | 3 | 104 | 143 | 170 | 162 | 173 | 219 | 974 |
| 1996 | Average monthly benefit | $ 116 | $ 212 | $ 314 | $ 509 | $ 798 | $1,242 | $1,569 | $ 859 |
| | Average final average salary | $1,687 | $1,720 | $1,782 | $1,844 | $2,204 | $2,546 | $2,733 | $2,205 |
| | Number of retirees | 5 | 103 | 133 | 147 | 157 | 191 | 184 | 920 |
| 1997 | Average monthly benefit | $ 121 | $ 276 | $ 304 | $ 564 | $ 824 | $1,256 | $1,707 | $ 915 |
| | Average final average salary | $1,943 | $1,991 | $1,627 | $1,980 | $2,178 | $2,584 | $2,949 | $2,285 |
| | Number of retirees | 5 | 101 | 151 | 150 | 151 | 194 | 203 | 955 |
| 1998 | Average monthly benefit | $ 137 | $ 243 | $ 363 | $ 549 | $ 832 | $1,279 | $1,672 | $ 907 |
| | Average final average salary | $1,919 | $1,915 | $1,980 | $1,963 | $2,265 | $2,662 | $2,914 | $2,346 |
| | Number of retirees | 9 | 127 | 179 | 168 | 168 | 193 | 248 | 1,092 |
| 1999 | Average monthly benefit | $ 126 | $ 239 | $ 376 | $ 605 | $ 860 | $1,248 | $1,879 | $ 991 |
| | Average final average salary | $1,870 | $2,051 | $2,069 | $2,242 | $2,359 | $2,636 | $3,283 | $2,529 |
| | Number of retirees | 4 | 112 | 184 | 185 | 181 | 235 | 265 | 1,166 |
| 2000 | Average monthly benefit | $ 175 | $ 245 | $ 364 | $ 647 | $ 834 | $1,358 | $1,895 | $1,032 |
| | Average final average salary | $2,700 | $2,009 | $2,019 | $2,324 | $2,295 | $2,895 | $3,291 | $2,590 |
| | Number of retirees | 7 | 120 | 191 | 176 | 192 | 254 | 291 | 1,231 |
| 2001 | Average monthly benefit | $ 222 | $ 251 | $ 432 | $ 675 | $ 959 | $1,383 | $1,744 | $1,072 |
| | Average final average salary | $2,258 | $2,063 | $2,110 | $2,420 | $2,499 | $2,903 | $3,061 | $2,621 |
| | Number of retirees | 13 | 379 | 344 | 219 | 267 | 485 | 755 | 2,462 |
| 2002 | Average monthly benefit | $ 98 | $ 257 | $ 429 | $ 652 | $ 980 | $1,437 | $1,862 | $ 959 |
| | Average final average salary | $1,405 | $2,223 | $2,200 | $2,418 | $2,576 | $3,027 | $3,282 | $2,636 |
| | Number of retirees | 7 | 252 | 305 | 259 | 273 | 381 | 262 | 1,739 |
| 2003 | Average monthly benefit | $ 107 | $ 288 | $ 496 | $ 725 | $1,061 | $1,448 | $1,822 | $1,037 |
| | Average final average salary | $1,499 | $2,208 | $2,377 | $2,548 | $2,737 | $3,052 | $3,283 | $2,745 |
| | Number of retirees | 7 | 224 | 275 | 254 | 311 | 460 | 262 | 1,793 |
| 2004 | Average monthly benefit | $ 134 | $ 279 | $ 424 | $ 706 | $1,036 | $1,442 | $1,659 | $ 996 |
| | Average final average salary | $1,945 | $2,371 | $2,264 | $2,551 | $2,701 | $3,038 | $3,050 | $2,710 |
| | Number of retirees | 7 | 327 | 337 | 338 | 422 | 619 | 360 | 2,410 |
| Ten Years Ended June 30, 2004 | | | | | | | | | |
| | Average monthly benefit | $ 143 | $ 258 | $ 399 | $ 632 | $ 927 | $1,359 | $1,738 | $ 979 |
| | Average final average salary | $1,907 | $2,099 | $2,079 | $2,272 | $2,455 | $2,858 | $3,059 | $2,537 |
| | Number of retirees | 67 | 1,849 | 2,242 | 2,066 | 2,284 | 3,185 | 3,049 | 14,742 |

Note: COLA increases and temporary benefits payable under MSEP 2000 until age 62 are excluded from the above for comparison purposes.

# Average Monthly Benefit Amounts

Ten Years Ended June 30, 2004

**General Employees in the MSEP**

| Member Retiring During Fiscal Year: | | Years Credited Service By Category <5 | 5-10 | 10-15 | 15-20 | 20-25 | 25-30 | 30+ | All Members |
|---|---|---|---|---|---|---|---|---|---|
| 1995 | Average monthly benefit | $ 72 | $ 174 | $ 291 | $ 504 | $ 731 | $1,069 | $1,468 | $ 803 |
| | Average final average salary | $ 889 | $1,651 | $1,689 | $1,799 | $1,992 | $2,308 | $2,495 | $2,051 |
| | Number of retirees | 3 | 89 | 139 | 168 | 161 | 172 | 219 | 951 |
| 1996 | Average monthly benefit | $ 116 | $ 183 | $ 295 | $ 498 | $ 798 | $1,230 | $1,561 | $ 851 |
| | Average final average salary | $1,687 | $1,688 | $1,762 | $1,839 | $2,204 | $2,544 | $2,736 | $2,201 |
| | Number of retirees | 5 | 98 | 130 | 146 | 157 | 189 | 182 | 907 |
| 1997 | Average monthly benefit | $ 121 | $ 238 | $ 279 | $ 522 | $ 793 | $1,247 | $1,695 | $ 897 |
| | Average final average salary | $1,943 | $1,966 | $1,607 | $1,930 | $2,172 | $2,582 | $2,950 | $2,274 |
| | Number of retirees | 5 | 94 | 148 | 147 | 148 | 192 | 201 | 935 |
| 1998 | Average monthly benefit | $ 137 | $ 212 | $ 351 | $ 532 | $ 832 | $1,276 | $1,668 | $ 902 |
| | Average final average salary | $1,919 | $1,880 | $1,984 | $1,955 | $2,265 | $2,660 | $2,916 | $2,345 |
| | Number of retirees | 9 | 121 | 176 | 166 | 168 | 192 | 247 | 1,079 |
| 1999 | Average monthly benefit | $ 126 | $ 231 | $ 347 | $ 593 | $ 860 | $1,235 | $1,872 | $ 981 |
| | Average final average salary | $1,870 | $2,043 | $2,031 | $2,238 | $2,359 | $2,636 | $3,284 | $2,523 |
| | Number of retirees | 4 | 110 | 181 | 183 | 181 | 233 | 263 | 1,155 |
| 2000 | Average monthly benefit | $ 175 | $ 227 | $ 358 | $ 634 | $ 834 | $1,358 | $1,890 | $1,029 |
| | Average final average salary | $2,700 | $1,988 | $2,016 | $2,310 | $2,295 | $2,895 | $3,289 | $2,587 |
| | Number of retirees | 7 | 116 | 190 | 174 | 192 | 254 | 290 | 1,223 |
| 2001 | Average monthly benefit | $ 101 | $ 238 | $ 394 | $ 635 | $ 959 | $1,377 | $1,742 | $1,062 |
| | Average final average salary | $1,612 | $2,043 | $2,048 | $2,381 | $2,499 | $2,904 | $3,059 | $2,605 |
| | Number of retirees | 12 | 375 | 338 | 214 | 267 | 482 | 754 | 2,442 |
| 2002 | Average monthly benefit | $ 98 | $ 255 | $ 419 | $ 641 | $ 980 | $1,433 | $1,856 | $ 954 |
| | Average final average salary | $1,405 | $2,221 | $2,197 | $2,416 | $2,576 | $3,028 | $3,284 | $2,636 |
| | Number of retirees | 7 | 251 | 302 | 257 | 273 | 380 | 260 | 1,730 |
| 2003 | Average monthly benefit | $ 107 | $ 247 | $ 462 | $ 671 | $1,038 | $1,445 | $1,815 | $1,023 |
| | Average final average salary | $1,499 | $2,185 | $2,368 | $2,545 | $2,739 | $3,053 | $3,288 | $2,748 |
| | Number of retirees | 7 | 212 | 265 | 242 | 306 | 459 | 260 | 1,751 |
| 2004 | Average monthly benefit | $ 134 | $ 269 | $ 421 | $ 695 | $1,036 | $1,442 | $1,659 | $ 995 |
| | Average final average salary | $1,945 | $2,366 | $2,263 | $2,550 | $2,701 | $3,037 | $3,050 | $2,710 |
| | Number of retirees | 7 | 321 | 336 | 335 | 422 | 618 | 360 | 2,399 |
| Ten Years Ended June 30, 2004 | | | | | | | | | |
| | Average monthly benefit | $ 120 | $ 238 | $ 379 | $ 609 | $ 921 | $1,355 | $1,734 | $ 972 |
| | Average final average salary | $1,784 | $2,085 | $2,061 | $2,259 | $2,455 | $2,858 | $3,059 | $2,533 |
| | Number of retirees | 66 | 1,787 | 2,205 | 2,032 | 2,275 | 3,171 | 3,036 | 14,572 |

Note: COLA increases and temporary benefits payable under MSEP 2000 until age 62 are excluded from the above for comparison purposes.

# Average Monthly Benefit Amounts

Ten Years Ended June 30, 2004

**Uniformed Members of the Water Patrol in the MSEP**

| | | Years Credited Service By Category | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Member Retiring During Fiscal Year:** | | **<5** | **5-10** | **10-15** | **15-20** | **20-25** | **25-30** | **30+** | **All Members** |
| 1995 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $0 | $1,973 | $ 0 | $1,973 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $0 | $3,189 | $ 0 | $3,189 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 1996 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $0 | $1,638 | $1,733 | $1,686 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $0 | $2,843 | $2,620 | $2,732 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 1997 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $0 | $1,976 | $2,168 | $2,072 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $0 | $3,327 | $3,088 | $3,208 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 1998 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $0 | $1,782 | $ 0 | $1,782 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $0 | $3,001 | $ 0 | $3,001 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 1999 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $0 | $ 0 | $2,567 | $2,567 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $0 | $ 0 | $3,767 | $3,767 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 2000 | Average monthly benefit | $0 | $0 | $ 0 | $1,749 | $0 | $ 0 | $3,297 | $2,523 |
| | Average final average salary | $0 | $0 | $ 0 | $4,432 | $0 | $ 0 | $4,014 | $4,223 |
| | Number of retirees | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| 2001 | Average monthly benefit | $0 | $0 | $1,664 | $ 0 | $0 | $1,923 | $3,236 | $2,274 |
| | Average final average salary | $0 | $0 | $5,833 | $ 0 | $0 | $3,172 | $4,274 | $4,426 |
| | Number of retirees | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 3 |
| 2002 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $0 | $ 0 | $1,843 | $1,843 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $0 | $ 0 | $3,432 | $3,432 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 2003 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $0 | $ 0 | $ 0 | $ 0 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $0 | $ 0 | $ 0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2004 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $0 | $1,743 | $ 0 | $1,743 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $0 | $3,628 | $ 0 | $3,628 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Ten Years Ended June 30, 2004 | | | | | | | | | |
| | Average monthly benefit | $0 | $0 | $1,664 | $1,749 | $0 | $1,839 | $2,474 | $2,092 |
| | Average final average salary | $0 | $0 | $5,833 | $4,432 | $0 | $3,193 | $3,533 | $3,616 |
| | Number of retirees | 0 | 0 | 1 | 1 | 0 | 6 | 6 | 14 |

Note: COLA increases and temporary benefits payable under MSEP 2000 until age 62 are excluded from the above for comparison purposes.

# Average Monthly Benefit Amounts

## Ten Years Ended June 30, 2004

**Legislators in the MSEP**

| Member Retiring During Fiscal Year: | | <5 | 5-10 | 10-15 | 15-20 | 20-25 | 25-30 | 30+ | All Members |
|---|---|---|---|---|---|---|---|---|---|
| | | Years Credited Service By Category | | | | | | | |
| 1995 | Average monthly benefit | $0 | $ 659 | $1,310 | $1,953 | $1,650 | $ 0 | $ 0 | $ 940 |
| | Average final average salary | $0 | $1,976 | $2,436 | $2,613 | $2,026 | $ 0 | $ 0 | $2,120 |
| | Number of retirees | 0 | 15 | 4 | 2 | 1 | 0 | 0 | 22 |
| 1996 | Average monthly benefit | $0 | $ 784 | $1,135 | $2,170 | $ 0 | $3,038 | $2,850 | $1,398 |
| | Average final average salary | $0 | $2,340 | $2,631 | $2,613 | $ 0 | $2,613 | $2,315 | $2,467 |
| | Number of retirees | 0 | 5 | 3 | 1 | 0 | 1 | 1 | 11 |
| 1997 | Average monthly benefit | $0 | $ 789 | $1,519 | $1,949 | $2,336 | $2,250 | $3,689 | $1,584 |
| | Average final average salary | $0 | $2,320 | $2,613 | $2,613 | $2,486 | $2,234 | $2,613 | $2,448 |
| | Number of retirees | 0 | 7 | 3 | 2 | 3 | 1 | 1 | 17 |
| 1998 | Average monthly benefit | $0 | $ 868 | $1,054 | $1,953 | $ 0 | $ 0 | $2,700 | $1,248 |
| | Average final average salary | $0 | $2,613 | $1,739 | $2,613 | $ 0 | $ 0 | $2,298 | $2,368 |
| | Number of retirees | 0 | 6 | 3 | 2 | 0 | 0 | 1 | 12 |
| 1999 | Average monthly benefit | $0 | $ 700 | $1,139 | $1,736 | $ 0 | $2,821 | $3,150 | $1,771 |
| | Average final average salary | $0 | $2,518 | $2,518 | $2,613 | $ 0 | $2,613 | $2,423 | $2,550 |
| | Number of retirees | 0 | 2 | 2 | 2 | 0 | 2 | 1 | 9 |
| 2000 | Average monthly benefit | $0 | $ 759 | $1,519 | $1,736 | $ 0 | $ 0 | $ 0 | $1,049 |
| | Average final average salary | $0 | $2,613 | $2,613 | $2,613 | $ 0 | $ 0 | $ 0 | $2,613 |
| | Number of retirees | 0 | 4 | 1 | 1 | 0 | 0 | 0 | 6 |
| 2001 | Average monthly benefit | $0 | $ 871 | $1,376 | $1,750 | $ 0 | $2,649 | $ 0 | $1,587 |
| | Average final average salary | $0 | $2,613 | $2,613 | $2,608 | $ 0 | $2,604 | $ 0 | $2,610 |
| | Number of retirees | 0 | 3 | 3 | 4 | 0 | 2 | 0 | 12 |
| 2002 | Average monthly benefit | $0 | $ 871 | $1,451 | $2,068 | $ 0 | $2,830 | $3,365 | $1,944 |
| | Average final average salary | $0 | $2,613 | $2,550 | $2,613 | $ 0 | $2,613 | $2,613 | $2,589 |
| | Number of retirees | 0 | 1 | 3 | 2 | 0 | 1 | 1 | 8 |
| 2003 | Average monthly benefit | $0 | $1,016 | $1,393 | $1,816 | $2,482 | $3,048 | $2,700 | $1,637 |
| | Average final average salary | $0 | $2,613 | $2,613 | $2,613 | $2,613 | $2,613 | $2,613 | $2,613 |
| | Number of retirees | 0 | 12 | 10 | 12 | 5 | 1 | 2 | 42 |
| 2004 | Average monthly benefit | $0 | $ 797 | $1,306 | $1,959 | $ 0 | $ 0 | $ 0 | $1,197 |
| | Average final average salary | $0 | $2,613 | $2,613 | $2,613 | $ 0 | $ 0 | $ 0 | $2,613 |
| | Number of retirees | 0 | 6 | 1 | 3 | 0 | 0 | 0 | 10 |
| Ten Years Ended June 30, 2004 | | | | | | | | | |
| | Average monthly benefit | $0 | $ 810 | $1,330 | $1,868 | $2,341 | $2,763 | $3,022 | $1,447 |
| | Average final average salary | $0 | $2,397 | $2,502 | $2,612 | $2,505 | $2,563 | $2,498 | $2,485 |
| | Number of retirees | 0 | 61 | 33 | 31 | 9 | 8 | 7 | 149 |

Note: COLA increases are excluded from the above for comparison purposes.

# Average Monthly Benefit Amounts

Ten Years Ended June 30, 2004

**Elected Officials in the MSEP**

| Member Retiring During Fiscal Year: | | Years Credited Service By Category <5 | 5-10 | 10-15 | 15-20 | 20-25 | 25-30 | 30+ | All Members |
|---|---|---|---|---|---|---|---|---|---|
| 1995 | Average monthly benefit | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Average final average salary | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1996 | Average monthly benefit | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Average final average salary | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | Average monthly benefit | $ 0 | $ 0 | $ 0 | $ 4,019 | $0 | $0 | $0 | $4,019 |
| | Average final average salary | $ 0 | $ 0 | $ 0 | $ 8,038 | $0 | $0 | $0 | $8,038 |
| | Number of retirees | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 1998 | Average monthly benefit | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Average final average salary | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1999 | Average monthly benefit | $ 0 | $ 0 | $ 4,019 | $ 0 | $0 | $0 | $0 | $4,019 |
| | Average final average salary | $ 0 | $ 0 | $ 8,038 | $ 0 | $0 | $0 | $0 | $8,038 |
| | Number of retirees | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 2000 | Average monthly benefit | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Average final average salary | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | Average monthly benefit | $ 1,668 | $3,154 | $ 4,882 | $ 5,004 | $0 | $0 | $0 | $3,918 |
| | Average final average salary | $10,007 | $8,038 | $10,007 | $10,007 | $0 | $0 | $0 | $9,613 |
| | Number of retirees | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 5 |
| 2002 | Average monthly benefit | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Average final average salary | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | Average monthly benefit | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Average final average salary | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2004 | Average monthly benefit | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Average final average salary | $ 0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ten Years Ended June 30, 2004 | | | | | | | | | |
| | Average monthly benefit | $ 1,668 | $3,154 | $4,594 | $4,512 | $0 | $0 | $0 | $3,947 |
| | Average final average salary | $10,007 | $8,038 | $9,351 | $9,023 | $0 | $0 | $0 | $9,163 |
| | Number of retirees | 1 | 1 | 3 | 2 | 0 | 0 | 0 | 7 |

Note: COLA increases are excluded from the above for comparison purposes.

# Average Monthly Benefit Amounts

Ten Years Ended June 30, 2004

**ALJLAP**

| Member Retiring During Fiscal Year: | | <5 | 5-10 | 10-15 | 15-20 | 20-25 | 25-30 | 30+ | All Members |
|---|---|---|---|---|---|---|---|---|---|
| | | **Years Credited Service By Category** | | | | | | | |
| 1995 | Average monthly benefit | $0 | $0 | $ 0 | $2,950 | $ 0 | $0 | $0 | $2,950 |
| | Average final average salary | $0 | $0 | $ 0 | $5,901 | $ 0 | $0 | $0 | $5,901 |
| | Number of retirees | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 1996 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $ 0 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1997 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $2,578 | $0 | $0 | $2,578 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $5,156 | $0 | $0 | $5,156 |
| | Number of retirees | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1998 | Average monthly benefit | $0 | $0 | $2,927 | $ 0 | $2,875 | $0 | $0 | $2,892 |
| | Average final average salary | $0 | $0 | $5,854 | $ 0 | $5,749 | $0 | $0 | $5,784 |
| | Number of retirees | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 3 |
| 1999 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $ 0 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2000 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $ 0 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $2,982 | $0 | $0 | $2,982 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $5,965 | $0 | $0 | $5,965 |
| | Number of retirees | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 2002 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $3,739 | $0 | $0 | $3,739 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $7,478 | $0 | $0 | $7,478 |
| | Number of retirees | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 2003 | Average monthly benefit | $0 | $0 | $ 0 | $3,615 | $ 0 | $0 | $0 | $3,615 |
| | Average final average salary | $0 | $0 | $ 0 | $7,231 | $ 0 | $0 | $0 | $7,231 |
| | Number of retirees | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 2004 | Average monthly benefit | $0 | $0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $ 0 |
| | Average final average salary | $0 | $0 | $ 0 | $ 0 | $ 0 | $0 | $0 | $ 0 |
| | Number of retirees | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ten Years Ended June 30, 2004 | | | | | | | | | |
| | Average monthly benefit | $0 | $0 | $2,927 | $3,449 | $3,010 | $0 | $0 | $3,177 |
| | Average final average salary | $0 | $0 | $5,854 | $6,899 | $6,019 | $0 | $0 | $6,355 |
| | Number of retirees | 0 | 0 | 1 | 4 | 5 | 0 | 0 | 10 |

Note: COLA increases are excluded from the above for comparison purposes.

# Average Monthly Benefit Amounts

Ten Years Ended June 30, 2004

**Judicial Plan**

| Member Retiring During Fiscal Year: | | <5 | 5-10 | 10-15 | 15-20 | 20-25 | 25-30 | 30+ | All Members |
|---|---|---|---|---|---|---|---|---|---|
| | | **Years Credited Service By Category** | | | | | | | |
| 1995 | Average monthly benefit | $ 262 | $0 | $3,226 | $3,282 | $3,489 | $3,047 | $3,320 | $3,172 |
| | Average final average salary | $5,809 | $0 | $6,504 | $6,564 | $6,972 | $6,095 | $6,641 | $6,581 |
| | Number of retirees | 1 | 0 | 4 | 10 | 4 | 1 | 3 | 23 |
| 1996 | Average monthly benefit | $ 0 | $0 | $3,006 | $3,496 | $3,881 | $ 0 | $ 0 | $3,360 |
| | Average final average salary | $ 0 | $0 | $6,176 | $6,992 | $7,762 | $ 0 | $ 0 | $6,782 |
| | Number of retirees | 0 | 0 | 3 | 4 | 1 | 0 | 0 | 8 |
| 1997 | Average monthly benefit | $1,120 | $0 | $0 | $3,490 | $0 | $ 0 | $ 0 | $2,898 |
| | Average final average salary | $6,719 | $0 | $0 | $6,979 | $0 | $ 0 | $ 0 | $6,914 |
| | Number of retirees | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 4 |
| 1998 | Average monthly benefit | $ 243 | $1,567 | $3,689 | $3,484 | $3,624 | $3,999 | $3,921 | $3,420 |
| | Average final average salary | $5,824 | $5,129 | $7,378 | $6,969 | $7,247 | $7,999 | $7,843 | $7,208 |
| | Number of retirees | 1 | 1 | 2 | 4 | 7 | 4 | 1 | 20 |
| 1999 | Average monthly benefit | $ 427 | $2,429 | $3,649 | $3,759 | $3,635 | $4,450 | $4,123 | $3,287 |
| | Average final average salary | $6,598 | $7,108 | $7,432 | $7,517 | $7,270 | $8,900 | $8,246 | $7,439 |
| | Number of retirees | 2 | 3 | 6 | 8 | 1 | 1 | 1 | 22 |
| 2000 | Average monthly benefit | $0 | $1,282 | $3,368 | $4,116 | $3,991 | $4,139 | $4,375 | $3,763 |
| | Average final average salary | $0 | $5,129 | $6,735 | $8,232 | $7,982 | $8,278 | $8,750 | $7,677 |
| | Number of retirees | 0 | 1 | 4 | 4 | 4 | 3 | 1 | 17 |
| 2001 | Average monthly benefit | $0 | $1,711 | $4,216 | $3,849 | $4,500 | $4,573 | $4,250 | $4,197 |
| | Average final average salary | $0 | $8,000 | $8,519 | $7,698 | $9,000 | $9,146 | $8,500 | $8,632 |
| | Number of retirees | 0 | 1 | 5 | 3 | 6 | 4 | 2 | 21 |
| 2002 | Average monthly benefit | $0 | $1,337 | $3,606 | $4,093 | $4,000 | $4,576 | $ 0 | $3,877 |
| | Average final average salary | $0 | $6,095 | $7,405 | $8,186 | $8,000 | $9,153 | $ 0 | $8,101 |
| | Number of retirees | 0 | 1 | 2 | 4 | 1 | 3 | 0 | 11 |
| 2003 | Average monthly benefit | $ 756 | $1,946 | $4,042 | $3,849 | $4,000 | $4,250 | $4,167 | $3,435 |
| | Average final average salary | $8,000 | $6,317 | $8,333 | $7,697 | $8,000 | $8,500 | $8,333 | $7,824 |
| | Number of retirees | 2 | 3 | 3 | 6 | 3 | 2 | 3 | 22 |
| 2004 | Average monthly benefit | $ 855 | $3,028 | $4,500 | $4,061 | $4,597 | $ 0 | $4,500 | $3,952 |
| | Average final average salary | $5,129 | $8,000 | $9,000 | $8,121 | $9,194 | $ 0 | $9,000 | $8,350 |
| | Number of retirees | 1 | 1 | 2 | 4 | 3 | 0 | 1 | 12 |
| Ten Years Ended June 30, 2004 | | | | | | | | | |
| | Average monthly benefit | $ 606 | $2,005 | $3,680 | $3,700 | $3,987 | $4,246 | $3,990 | $3,562 |
| | Average final average salary | $6,585 | $6,603 | $7,459 | $7,400 | $7,972 | $8,493 | $7,980 | $7,590 |
| | Number of retirees | 8 | 11 | 31 | 50 | 30 | 18 | 12 | 160 |

Note: COLA increases are excluded from the above for comparison purposes.

# Retirees and Beneficiaries

## Tabulated by Fiscal Year of Retirement

### MSEP

| Fiscal Year of Retirement | Number | Benefits | Average Monthly Benefit |
|---|---|---|---|
| 1965 & prior | 3 | $ 15,875 | $441 |
| 1966 | 1 | 11,142 | 929 |
| 1967 | 2 | 15,647 | 652 |
| 1968 | 4 | 15,890 | 331 |
| 1969 | 5 | 31,372 | 523 |
| 1970 | 8 | 59,604 | 621 |
| 1971 | 5 | 47,376 | 790 |
| 1972 | 15 | 100,624 | 559 |
| 1973 | 46 | 299,387 | 542 |
| 1974 | 56 | 322,781 | 480 |
| 1975 | 76 | 455,863 | 500 |
| 1976 | 96 | 623,139 | 541 |
| 1977 | 130 | 880,877 | 565 |
| 1978 | 123 | 763,843 | 518 |
| 1979 | 119 | 867,270 | 607 |
| 1980 | 145 | 1,030,781 | 592 |
| 1981 | 189 | 1,524,346 | 672 |
| 1982 | 281 | 2,198,044 | 652 |
| 1983 | 302 | 2,555,718 | 705 |
| 1984 | 308 | 2,247,207 | 608 |
| 1985 | 333 | 3,010,976 | 753 |
| 1986 | 410 | 3,050,773 | 620 |
| 1987 | 469 | 4,233,052 | 752 |
| 1988 | 531 | 5,639,925 | 885 |
| 1989 | 589 | 6,876,353 | 973 |
| 1990 | 599 | 6,914,322 | 962 |
| 1991 | 684 | 9,021,008 | 1,099 |
| 1992 | 773 | 9,663,559 | 1,042 |
| 1993 | 866 | 10,652,783 | 1,025 |
| 1994 | 852 | 10,165,220 | 994 |
| 1995 | 1,112 | 13,899,405 | 1,042 |
| 1996 | 1,083 | 13,862,440 | 1,067 |
| 1997 | 1,115 | 14,849,660 | 1,110 |
| 1998 | 1,271 | 16,749,417 | 1,098 |
| 1999 | 1,379 | 18,996,005 | 1,148 |
| 2000 | 1,456 | 21,257,557 | 1,217 |
| 2001 | 2,728 | 43,929,079 | 1,342 |
| 2002 | 2,022 | 27,957,767 | 1,152 |
| 2003 | 2,072 | 30,882,256 | 1,242 |
| 2004 | 2,659 | 40,043,676 | 1,255 |
| Total | 24,917 | $325,722,019 | 1,089 |

# Retirees and Beneficiaries

## Tabulated by Fiscal Year of Retirement

**ALJLAP**

| Fiscal Year of Retirement | Number | Benefits | Average Monthly Benefit |
|---|---|---|---|
| 1989 & prior | 3 | $124,836 | $3,468 |
| 1991 | 1 | 5,701 | 475 |
| 1992 | 3 | 122,092 | 3,391 |
| 1993 | 1 | 44,598 | 3,717 |
| 1994 | 1 | 22,805 | 1,900 |
| 1995 | 2 | 69,360 | 2,890 |
| 1997 | 3 | 90,998 | 2,528 |
| 1998 | 3 | 131,736 | 3,659 |
| 2001 | 2 | 63,449 | 2,644 |
| 2002 | 1 | 48,530 | 4,044 |
| 2003 | 3 | 132,749 | 3,687 |
| 2004 | 2 | 53,548 | 2,231 |
| Total | 25 | $910,402 | 3,035 |

# Retirees and Beneficiaries

## Tabulated by Fiscal Year of Retirement

**Judicial Plan**

| Fiscal Year of Retirement | Number | Benefits | Average Monthly Benefit |
|---|---|---|---|
| 1976 & prior | 5 | $ 42,334 | $ 706 |
| 1977 | 4 | 80,790 | 1,683 |
| 1978 | 1 | 12,212 | 1,018 |
| 1979 | 2 | 49,374 | 2,057 |
| 1980 | 3 | 33,231 | 923 |
| 1981 | 5 | 140,467 | 2,341 |
| 1982 | 2 | 75,263 | 3,136 |
| 1983 | 9 | 259,789 | 2,405 |
| 1984 | 3 | 68,301 | 1,897 |
| 1985 | 5 | 222,709 | 3,712 |
| 1986 | 8 | 215,693 | 2,247 |
| 1987 | 25 | 997,817 | 3,326 |
| 1988 | 12 | 513,279 | 3,564 |
| 1989 | 18 | 807,640 | 3,739 |
| 1990 | 10 | 411,601 | 3,430 |
| 1991 | 26 | 1,291,154 | 4,138 |
| 1992 | 14 | 675,601 | 4,021 |
| 1993 | 16 | 675,435 | 3,518 |
| 1994 | 13 | 580,869 | 3,724 |
| 1995 | 27 | 1,511,929 | 4,666 |
| 1996 | 13 | 600,499 | 3,849 |
| 1997 | 7 | 305,526 | 3,637 |
| 1998 | 27 | 1,428,779 | 4,410 |
| 1999 | 29 | 1,348,759 | 3,876 |
| 2000 | 28 | 1,357,358 | 4,040 |
| 2001 | 22 | 1,365,861 | 5,174 |
| 2002 | 16 | 750,037 | 3,906 |
| 2003 | 27 | 1,197,445 | 3,696 |
| 2004 | 18 | 857,668 | 3,971 |
| Total | 395 | $17,877,420 | 3,772 |

# Total Benefits Payable

Tabulated by Attained Ages of Benefit Recipients

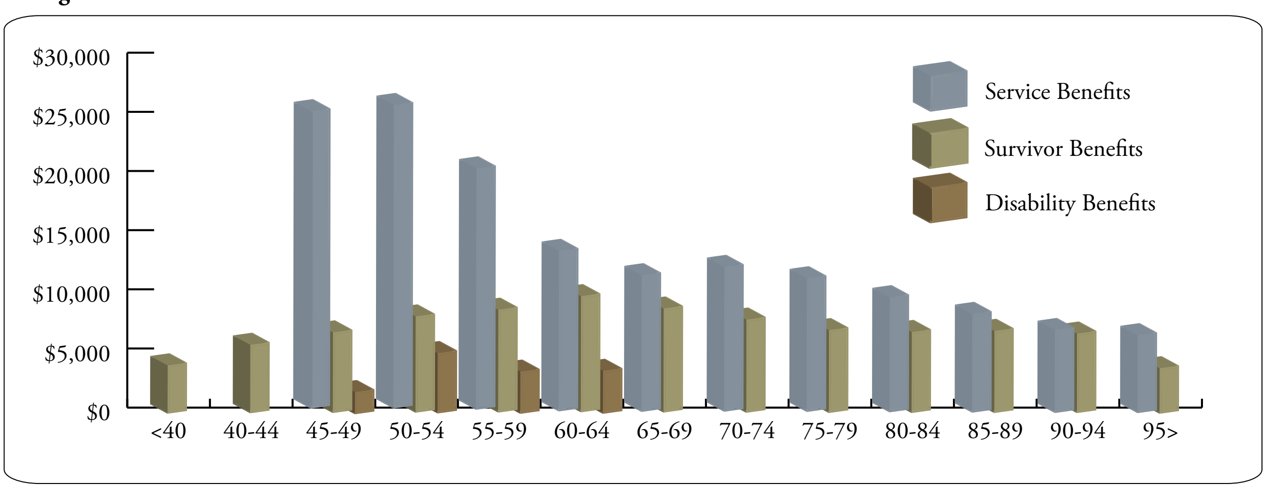
As of June 30, 2004

**MSEP**

| Attained Ages | Service Retirement No. | Service Retirement Annual Benefits | Disability Retirement No. | Disability Retirement Annual Benefits | Survivors and Beneficiaries No. | Survivors and Beneficiaries Annual Benefits | Totals No. | Totals Annual Benefits |
|---|---|---|---|---|---|---|---|---|
| Under 20 | | | | | 85 | $ 239,593 | 85 | $ 239,593 |
| 20-24 | | | | | 15 | 60,121 | 15 | 60,121 |
| 25-29 | | | | | 9 | 82,891 | 9 | 82,891 |
| 30-34 | | | | | 12 | 58,649 | 12 | 58,649 |
| 35-39 | | | | | 28 | 166,815 | 28 | 166,815 |
| 40-44 | | | | | 50 | 292,573 | 50 | 292,573 |
| 45-49 | 19 | $ 493,896 | 1 | $ 1,776 | 97 | 671,566 | 117 | 1,167,238 |
| 50-54 | 903 | 23,955,242 | 7 | 35,978 | 202 | 1,676,173 | 1,112 | 25,667,393 |
| 55-59 | 3,012 | 63,445,819 | 8 | 28,308 | 248 | 2,201,804 | 3,268 | 65,675,931 |
| 60-64 | 4,128 | 57,593,468 | 9 | 32,482 | 290 | 2,913,770 | 4,427 | 60,539,720 |
| 65-69 | 4,226 | 50,091,810 | | | 415 | 3,727,289 | 4,641 | 53,819,099 |
| 70-74 | 3,581 | 45,014,815 | | | 441 | 3,540,294 | 4,022 | 48,555,109 |
| 75-79 | 2,783 | 32,254,901 | | | 482 | 3,430,475 | 3,265 | 35,685,376 |
| 80-84 | 1,782 | 17,740,750 | | | 322 | 2,240,700 | 2,104 | 19,981,450 |
| 85-89 | 952 | 8,106,286 | | | 149 | 1,051,303 | 1,101 | 9,157,589 |
| 90-94 | 354 | 2,522,505 | | | 51 | 347,799 | 405 | 2,870,304 |
| 95 | 34 | 202,656 | | | 2 | 5,280 | 36 | 207,936 |
| 96 | 20 | 151,603 | | | 4 | 23,949 | 24 | 175,552 |
| 97 | 12 | 71,175 | | | 3 | 10,308 | 15 | 81,483 |
| 98 | 4 | 33,897 | | | | | 4 | 33,897 |
| 99 | 7 | 45,828 | | | 1 | 4,131 | 8 | 49,959 |
| 100 | 5 | 40,092 | | | 1 | 732 | 6 | 40,824 |
| 101 | 2 | 15,984 | | | | | 2 | 15,984 |
| 102 | | | | | 1 | 1,572 | 1 | 1,572 |
| Total | 21,824 | $301,780,727 | 25 | $98,544 | 2,908 | $22,747,787 | 24,757 | $324,627,058 |

Average age at retirement 60.8 years
Average age now 69.0 years

**Average Benefits**



# Total Benefits Payable

Tabulated by Attained Ages of Benefit Recipients

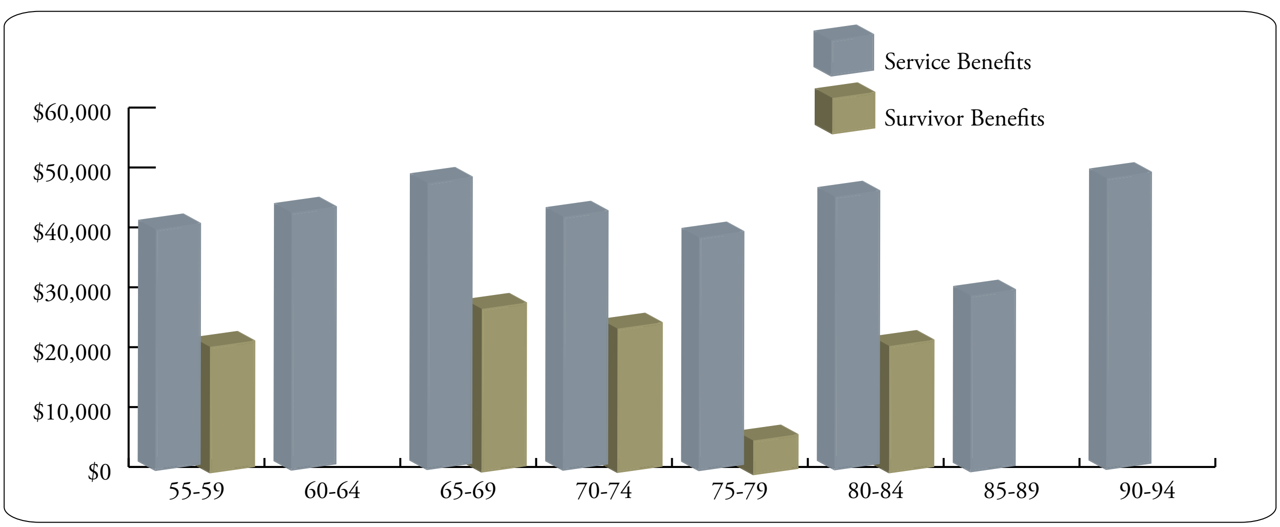
As of June 30, 2004

**ALJLAP**

| | Service Retirement | | Disability Retirement | | Survivors and Beneficiaries | | Totals | |
|---|---|---|---|---|---|---|---|---|
| **Attained Ages** | **No.** | **Annual Benefits** | **No.** | **Annual Benefits** | **No.** | **Annual Benefits** | **No.** | **Annual Benefits** |
| 57 | 1 | $ 48,528 | | | | | 1 | $ 48,528 |
| 58 | 2 | 76,440 | | | | | 2 | 76,440 |
| 59 | | | | | 1 | $ 21,648 | 1 | 21,648 |
| 62 | 2 | 89,004 | | | | | 2 | 89,004 |
| 66 | 1 | 50,856 | | | 1 | 28,128 | 2 | 78,984 |
| 69 | 1 | 48,288 | | | | | 1 | 48,288 |
| 72 | 2 | 87,624 | | | | | 2 | 87,624 |
| 74 | | | | | 3 | 74,268 | 3 | 74,268 |
| 75 | 1 | 22,800 | | | | | 1 | 22,800 |
| 76 | 1 | 44,592 | | | | | 1 | 44,592 |
| 78 | 1 | 49,260 | | | 1 | 5,700 | 2 | 54,960 |
| 79 | 1 | 44,441 | | | | | 1 | 44,441 |
| 80 | 1 | 48,876 | | | | | 1 | 48,876 |
| 82 | 1 | 45,576 | | | | | 1 | 45,576 |
| 84 | | | | | 2 | 43,608 | 2 | 43,608 |
| 87 | 1 | 30,384 | | | | | 1 | 30,384 |
| 90 | 1 | 50,388 | | | | | 1 | 50,388 |
| Total | 17 | $737,057 | 0 | $0 | 8 | $173,352 | 25 | $910,409 |

| | |
|---|---|
| Average age at retirement | 65.2 years |
| Average age now | 73.2 years |

**Average Benefits**



# Total Benefits Payable

Tabulated by Attained Ages of Benefit Recipients

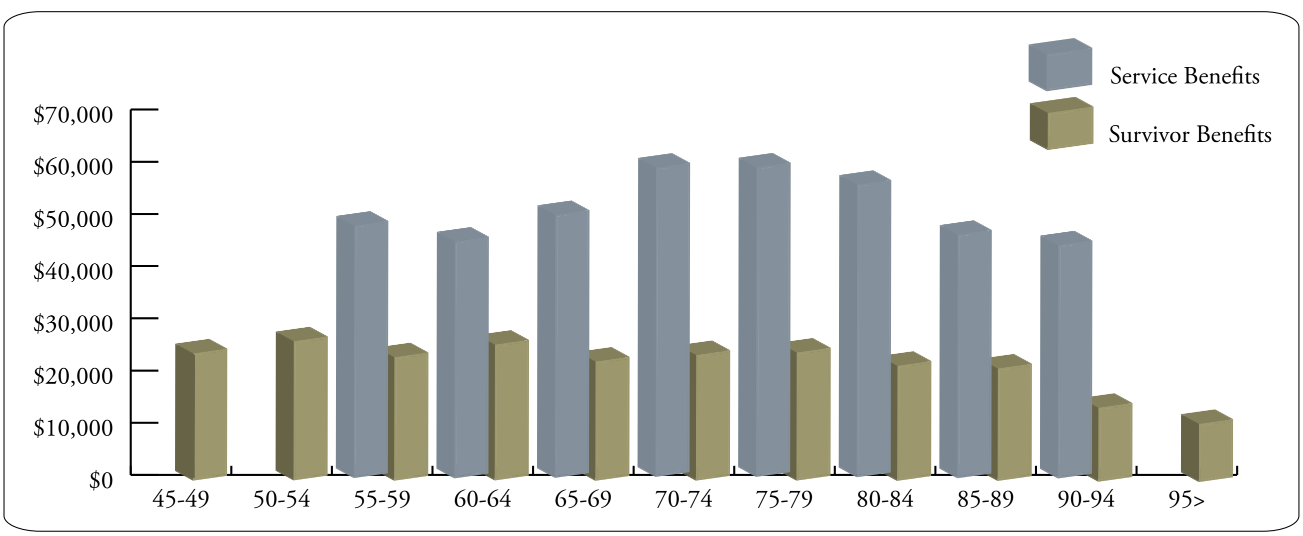
As of June 30, 2004

**Judicial Plan**

| | Service Retirement | | Disability Retirement | | Survivors and Beneficiaries | | Totals | |
|---|---|---|---|---|---|---|---|---|
| **Attained Ages** | **No.** | **Annual Benefits** | **No.** | **Annual Benefits** | **No.** | **Annual Benefits** | **No.** | **Annual Benefits** |
| 45-49 | | | | | 1 | $ 24,984 | 1 | $ 24,984 |
| 50-54 | | | | | 5 | 136,733 | 5 | 136,733 |
| 55-59 | 9 | $ 449,520 | | | 11 | 266,581 | 20 | 716,101 |
| 60-64 | 38 | 1,779,979 | | | 6 | 160,128 | 44 | 1,940,107 |
| 65-69 | 43 | 2,237,168 | | | 6 | 140,268 | 49 | 2,377,436 |
| 70-74 | 67 | 4,105,730 | | | 11 | 271,356 | 78 | 4,377,086 |
| 75-79 | 55 | 3,372,628 | | | 27 | 678,963 | 82 | 4,051,591 |
| 80-84 | 39 | 2,258,981 | | | 22 | 496,440 | 61 | 2,755,421 |
| 85-89 | 15 | 722,381 | | | 21 | 462,623 | 36 | 1,185,004 |
| 90-94 | 5 | 230,556 | | | 10 | 143,519 | 15 | 374,075 |
| 95 and over | | | | | 6 | 67,236 | 6 | 67,236 |
| Total | 271 | $15,156,943 | 0 | $0 | 126 | $2,848,831 | 397 | $18,005,774 |

| | |
|---|---|
| Average age at retirement | 65.5 years |
| Average age now | 75.7 years |

**Average Benefits**



# Acknowledgements

The Missouri State Employees' Retirement System wishes to extend their appreciation to the following entities for the permitted use of photographs and historical information commemorating the 200th anniversary of the Lewis and Clark expedition.

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